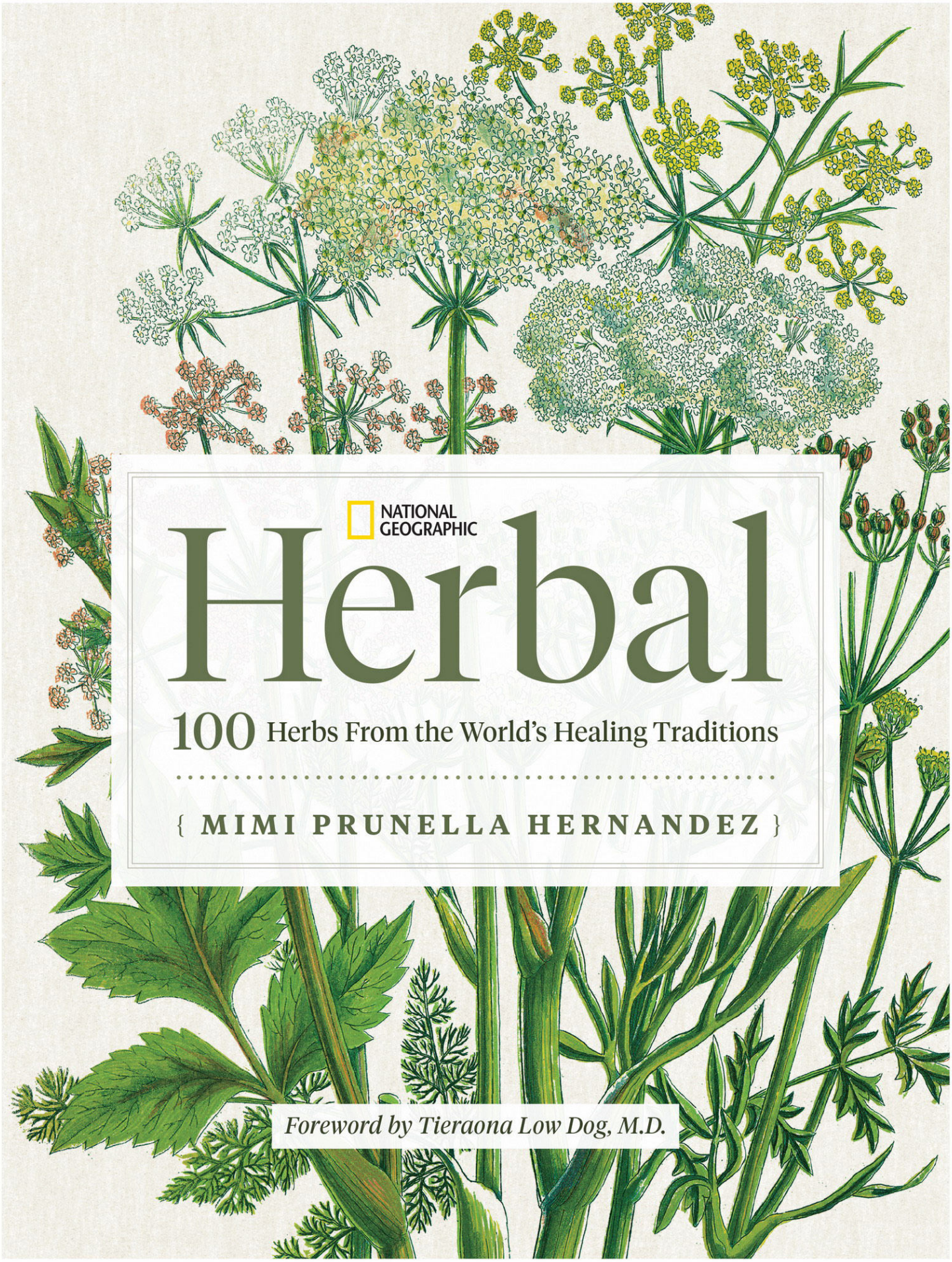


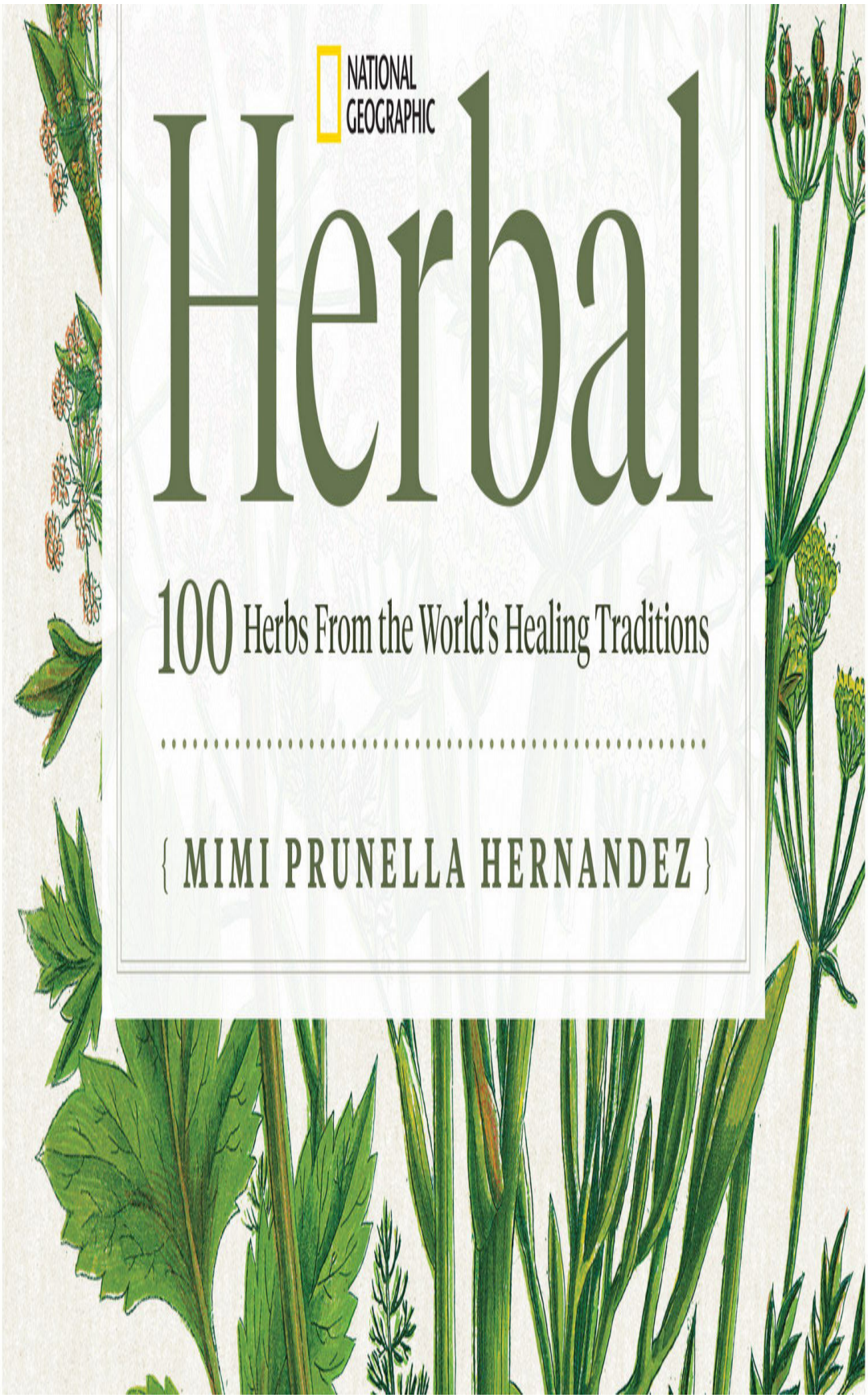
NATIONAL GEOGRAPHIC

Herbal

100 Herbs From the World's Healing Traditions

{ MIMI PRUNELLA HERNANDEZ }

Foreword by Tieraona Low Dog, M.D.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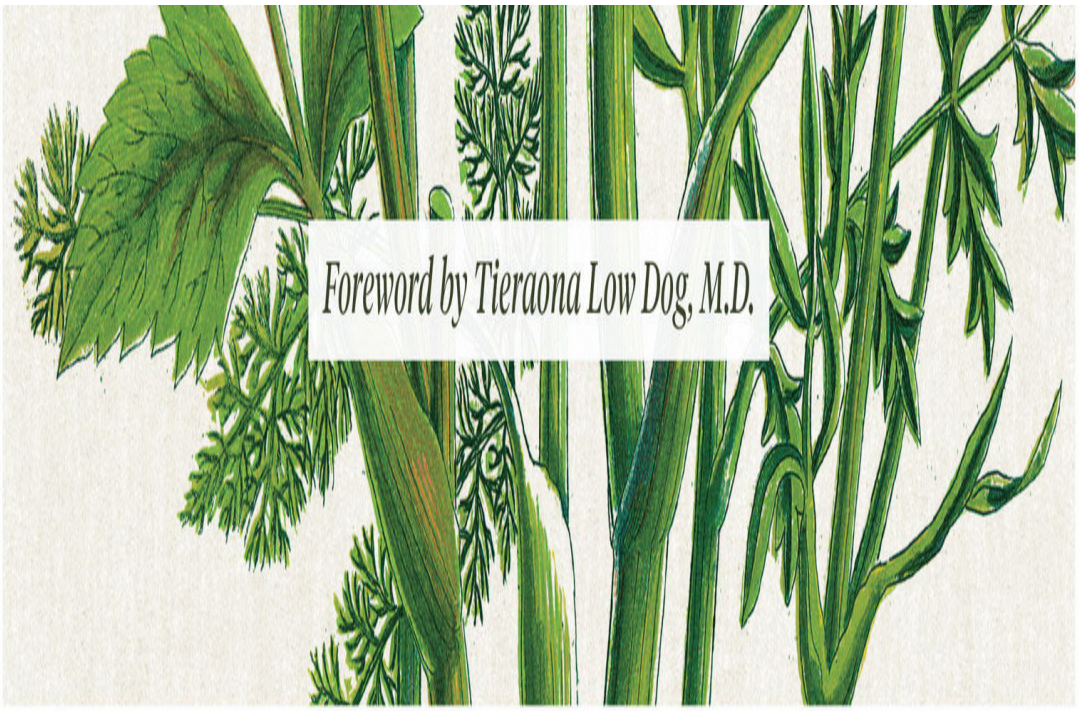
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NATIONAL GEOGRAPHIC

Herbal

IMPORTANT NOTE TO READERS

This book is meant to increase your knowledge about the use of herbs and plants in healing traditions. It is not intended as a medical manual, and the author and the publisher are not rendering medical or other professional advice to the individual reader. You should not use the information contained in this book as a substitute for the advice of a licensed health care professional and should consult a licensed health care professional to address any health concerns specific to you. This book includes content about cannabis, which is illegal under federal law as well as under certain state laws. You should abide by local, state, and federal laws concerning the use of cannabis. Because herbs, plants, spices, and other remedies can interact with medications or affect some medical conditions, you should always check with your licensed health care professional before using any of the herbs, plants, spices, and other plant substances described in this book.

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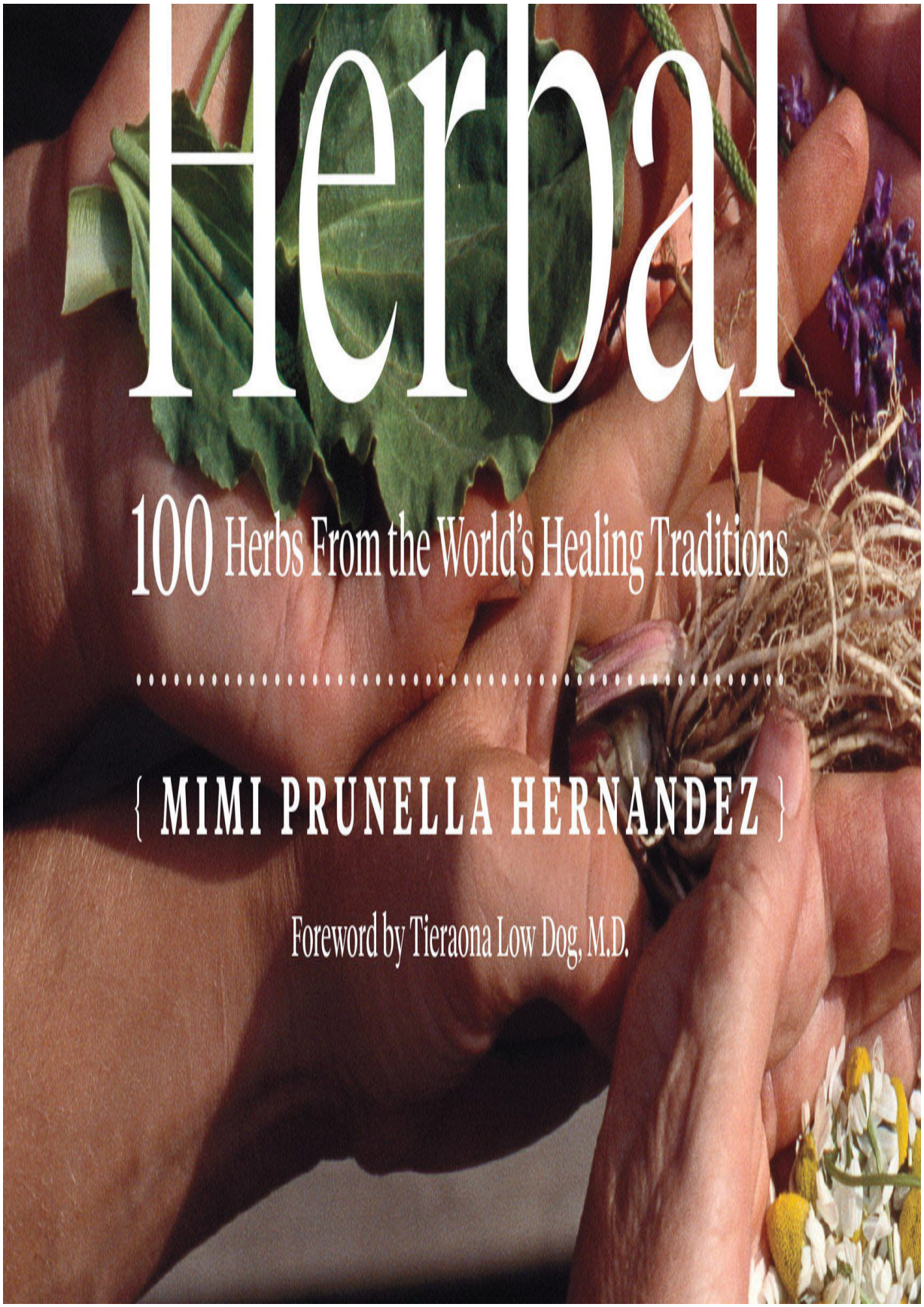
From a 14th-century herbal, ladies gather mint.

NATIONAL
GEOGRAPHIC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FRONT COVER: *A bouquet of herbs ca 1846*
TITLE PAGES 1–2: *A circle of herbs, a community of herbalists*

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Sage leaves await trimming.

FOREWORD

Tieraona Low Dog, M.D.

Since the dawn of time, human lives have been intertwined with plants. From the Neanderthals who consumed plants such as yarrow and chamomile for medical effects roughly 60,000 years ago to people in China and Sumer (modern-day Iraq) who used plants to treat illness more than 5,000 years ago, we have relied upon plants for shelter, food, clothing, and medicine.

Today, herbal remedies are still a primary source of treatment in regions with limited pharmaceutical access. They are also popular even where Western medicine is readily available. Surveys show many consumers believe herbal therapies are effective and often represent a safer alternative to prescription drugs, provide people control over their health, and may even align with cultural or family traditions.

For decades I've researched, written about, and lectured on the safe and effective use of plant medicines. I've taught integrative and herbal medicine to thousands of physicians and other health professionals, served on advisory councils at the National Institutes of Health, chaired botanical expert panels at the United States Pharmacopeia, and worked with Fortune 500 companies to develop safe, effective, and sustainable natural supplement products. My passion for ethnobotany has led me to grow more than 50 species of medicinal herbs in my garden and travel the globe to learn how people use plants. As a physician, I believe Western biomedicine is almost always the best option for serious disease and trauma. Still, I find it can be heavy-handed for

chronic conditions, as drugs can be dangerous or come with side effects that are unpleasant. In clinical practice, I weave traditional herbal wisdom with modern science. I turn to herbal remedies for gastrointestinal problems, minor infections, women's health issues, chronic fatigue, and more, recommending them far more often than prescription drugs.

I was excited to read *National Geographic Herbal,* written by my colleague Mimi Prunella Hernandez. Her lifelong love of herbs began as a child learning about medicinal plants from her grandmother in Mexico City. Craving a deeper scientific understanding, Mimi earned her master of science in herbal medicine—studying with the late James Duke, a legend in the field of medicinal botany. Today, Mimi is the executive director of the American Herbalists Guild, a seasoned herbal clinician, a teacher, and a Registered Herbalist, giving her the authority to pen this *Herbal.*

I was unprepared, however, for the beauty of Mimi's writing. She skillfully brings the plants to life, referring to them as if they were dear friends and detailing where each plant is found, how it grows, its unique history, and how it is used medicinally. Mimi also honors the rich herbal traditions of the world and gives voice to the gifts of scientific knowledge. The accompanying photography is breathtaking. I know this book will delight many, from the casually curious to the most experienced herbalist.

INTRODUCTION

Cacao pods

Coming Into Herbalism

- - - - - - - - - - - - -

I come from a lineage of herbalists—as we all do. My cultural identity is rooted in the Colombian and Mexican plant traditions of my upbringing. My herbalist path began quietly as I shadowed my Mexican *abuelita*—my grandmother. Doña Maria de los Angeles was the most industrious and resilient woman I have ever known. Her tender care and ageless wisdom about plants and healing drew family and neighbors to her side. As a young girl in her colorful kitchen, I clung to her apron strings as she softly hummed, stirring a pot of dark and spicy drinking chocolate. I tasted enchantment as the sweet waft of the volatile compounds of true cinnamon filled the air.

Skipping around Abuelita's Mexico City courtyard, I took note as she gathered weeds and plucked leaves from cheery *manzanilla* (chamomile) and sacred *ruda* (rue), which seemed to vie for her attention. "Pick me! Pick me!" my imaginative young ears heard the flowers murmur to her. I peered from the shadows as she draped her altar with sunflowers and roses and devoutly prayed for the health of her loved ones, plants and people both.

Abuelita never called herself an herbalist, but in her role as a respected elder and matriarch, she nurtured those around her with home remedies. Like many Mexican grandmothers, she spoke of chamomile tea as a remedy for cramps and restlessness, aloe as a topical remedy for kitchen burns, and rue for *"mal de ojo,"* a folk illness superstitiously blamed on the glance of an onlooker. I didn't

know it then, but the time I spent with her as a little girl planted seeds that germinated as I became an herbalist.

BUDDING

As a high school student in Indiana, I often reminisced about those herb-peppered summer days and holidays spent in Mexico City with my abuelita. I also pondered the herbal stories of my Colombian mother's upbringing in Bogotá and the natural remedies she recounted from her childhood. I found myself diving deeply into academia, especially the sciences. My inquisitive head buzzed with the rigors of biology, chemistry, botany, and physics. I was consumed with an insatiable quest to learn about the inner workings of the body and the outer workings of the natural world. I explored both terrains, equally comfortable in the lab and the field. In college, I became a young mother, and I often found myself humming in the kitchen, a little one on my apron strings as I tinkered with herbal recipes. Now I was the one stirring the chocolate. But there was always some elusive missing ingredient.

My academic future felt equally elusive. I considered medical school, but my heart longed for something different. One morning in my little kitchen garden, as I gathered lemon verbena leaves for a batch of homemade soap, I sensed the presence of my ancestors. I heard a wise voice coming from the ground: "Pick me." It was undeniable: I was called to study herbalism. I put my hands into the earth of my herb garden and connected with the rich soil that would nurture my chosen direction.

A page from theM Libellus de Medicinalibus Indorum Herbis, *a 16th-century Aztec herbal*

BLOOMING

I began by reading as many herb books as possible. I devoured every copy of the American Botanical Council's magazine, *HerbalGram,* and perused all the symposium proceedings of the American Herbalists Guild. My reading led me to discover the herbalist who would become my most influential mentor, Dr. James Duke.

Dr. Duke was a widely known USDA ethnobotanist and curator of Dr. Duke's Phytochemical and Ethnobotanical Databases, to this day one of the most comprehensive and authoritative compilations of plant, chemical, and bioactivity data. I was enthralled with his book *The Green Pharmacy.* I experimented enthusiastically with many remedies and

shared the Spanish translation of his book with my Colombian *mami* and *tías.* Dr. Duke's botanical lexicon was music to my ears. His prolific teachings on plant chemistry, secondary metabolites, and medicinal constituents ignited my brain. His tales of adventures in the Colombian Amazon, my maternal ancestral land, stoked my soul. I decided I would go to sit at the foot of this great teacher.

I moved to Maryland and enrolled at the Tai Sophia Institute of Healing Arts (now Maryland University of Integrative Health), where Dr. Duke was on the faculty. Under his guidance, I plunged into the field. I rolled up my sleeves and got my hands dirty in beds of echinacea and yarrow. He was a warm-hearted teacher and an accomplished folk musician, with a nourishing bowl of herbal soup on the stove for students and a ditty in the air about plants like ginseng and witch hazel.

A DEEPLY ROOTED LINEAGE

Under the tutelage of several brilliant herbalists, I began to establish my knowledge and practice within the lineage of Western herbalism. Our materia medica classes taught us about different medicinal plants and their uses. One day we were studying cinnamon, and for the first time, I learned that there are different types of cinnamon. I tasted a sample of the kind that is a familiar kitchen spice. Cassia, as it is called, was firm, bold, and warming.

The author, Mimi Prunella Hernandez, amid a field of goldenrod near her North Carolina home

And next I sampled *Cinnamomum verum*—TRUE cinnamon. As its gentle volatile oils stimulated my olfactory senses, I was carried back to my abuelita's Mexican kitchen. I could see the bright turquoise and yellow walls, the shelves lined with pottery. I could hear her voice and the simmer of the *chocolatera*—the chocolate pitcher—steaming on the stove as she whisked her hot chocolate. Most memorably, I could smell her cinnamon. True cinnamon. The elusive ingredient, missing in my attempts to replicate her chocolate.

PROFESSIONAL FRUITION

As I worked toward my master of science in herbal medicine, pursuing both research and clinical tracks, I lent my services as an information broker to researchers,

doctors, and herbalists. I routinely visited the National Library of Medicine to pursue all things herbal in the research literature. My thesis work investigated herbal strategies such as turmeric to address cardiovascular inflammation as measured by C-reactive protein. I completed a rigorous clinical rotation, and in 2005, I became a Registered Herbalist as recognized by the American Herbalists Guild, a milestone that represented the fruition of my path as a clinical herbalist. Eight years later, I became the executive director of the organization, a post to which I have now dedicated my career for more than a decade.

Eventually I moved from Maryland to the Blue Ridge Mountains, ready to immerse myself in the prolific beauty of misty, forested ridges lined with elderberry and Solomon's seal. With a baby on my back, I marveled at the wilderness, fine-tuning my skills in identifying plants, garbling stems, digging roots, and foraging berries.

SCATTERING SEEDS

My life as an herbalist has brought me to a place I call the PonderLand. This first piece of land I have the opportunity to tend is nestled in the North Carolina foothills. Here beside the tall junipers, I contemplate all I have received over the years and how my work now is to give back. Here my partner and I honor the ancestors of this land while scattering ginseng seeds, rewilding to show care for this native plant sanctuary we have established. We build soil and nurture gardens, watching their rhythms over the seasons.

With my two oldest children grown and off in the world, I recently remarried and welcomed another child into my life. He shadows me in our herbal kitchen and stirs the chocolate now, shredding true cinnamon sticks with his fingers, his curious brain stimulated by the familiar waft of aromatics.

I now take my place beside my plant allies, ancestors, and teachers, scattering seeds of herbal knowledge. It is yet another long path of self-discovery as I home in on my voice as a wisdom tender.

Liber Herbalis

And now I find myself the author of an herbal. The noun “herbal” refers to a book of herbs (in Latin, *liber herbalis*). Herbalists share a broad understanding of the word “herb.” Culinary herbs—the kitchen botanicals that are often aromatic, green, and leafy—are included in the category of medicinal herbs, which also includes roots, seeds, flowers, fruits, leaves, twigs, barks, and fungi, all used for healing purposes. This broader definition of “herb” holds true for this book, too.

Herbals include basic materia medica, or information about medicinal plants, their uses, indications, and advice. An herbal may highlight introductory information on a plant’s qualities, energetics, and traditional and pharmacological insights. Herbals often include photography or illustrations to assist with plant recognition. Although it may offer nuggets of wisdom and a handful of home remedies, an herbal is not necessarily intended as a comprehensive how-to manual for plant identification, herbal administration, or clinical use.

I own several herbals, and they hold an honored place in my library. My earliest favorites are visibly worn, notes scribbled in the margins. I have taken herbals on road trips and wild adventures, their pages stained with berries and dried leaves pressed in between.

To this day, there is usually an herbal on my nightstand. Herbals interwoven with plant magic, personality, poetry, art, and other musings feed my intuitive soul as I lie down for the night. The most handy herbals live in my kitchen as a source of inspiration when I concoct recipes. I leaf through

them, perusing the pictures of jars and salves, tinctures, and dried herbs. I've had herbals geared for children adorning the shelves of my children's bedroom, hoping to ignite interest in their little hearts. My most beautiful herbals grace the coffee table, delighting my guests and sparking lovely conversations.

THE PLAN FOR THIS HERBAL

This herbal offers insight as to how an herbalist might use 100 beloved plants. But as herbalism is not a standardized path, herbalists vary wildly. Kitchen herbalists, garden herbalists, folk herbalists, community herbalists, clinical herbalists, and even doctors and researchers might use these remedies in their own unique ways. In this book, while I often refer to how "herbalists" use a particular plant, I do not speak for every herbalist, but from my own experience and observations.

My bioregional lens as an herbalist of 27 years focuses on plants of the eastern United States, while my cultural perspective is steeped in Latin American folk herbalism. My clinical training is rooted in Western herbalism with a pinch of Ayurveda. I draw from my own unique tapestry—my heritage, upbringing, scholarly pursuits, and clinical experience—joined with sound, evidence-based information balancing science, tradition, and intuition.

The author prepares lemongrass, lemon balm, and goldenrod, her wrist embellished with a tattoo depicting rue.

I like to imagine the ways in which you, the reader, might enjoy this *National Geographic Herbal.* I envision herbal students adding it to their collection of herbals and reading it from cover to cover, scribbling notes in the margins as I once did with mine. I picture nature enthusiasts taking it on road trips and wilderness adventures, using witch hazel leaves as a bookmark. I dream that some will keep it near

their nightstand, reading sidebars on mugwort and lavender for inspiration as they're carried into the dreamworld. I predict many will leave it on the coffee table to display the vintage botanical art and photography. Others might keep it in the kitchen to try some of the simple recipes scattered throughout. Homesteaders and caregivers will add it to their baskets and bookshelves for insights on self-care and ideas for tending to the community and the land.

In *National Geographic Herbal*, we journey from the micro to the macro. We begin with the bodily sensations of how one experiences herbs. Then we step into the kitchen and apothecary for nourishing inspiration and do-it-yourself tips and tricks. We travel down the garden path to cultivate allies and explore weeds along the way. From there, we take the forest path and pan out to examine community uses of herbs. Ultimately, we adopt a global perspective, exploring some of the world's most traveled herbs. You will find featured traditions and critical topics relevant to herbal medicine featured throughout, including current ethical and ecological issues in the field.

A medieval herbal

A FINAL NOTE

Herbalism has empowered me to care for my family and loved ones. This path has led me to teach and forage all over the globe, expanding my reverence for bioregionalism and sacred plant traditions. Herbal medicine has taught me the importance of community care in action. Herbalism has shown me that even through the darkest grief, I can find solace in the plants.

I will admit that in writing this book, I found it challenging to step away from the first-person perspective, from sharing personal stories and anecdotal quips, but an herbal requires the author to do just that. As you turn this page and begin the first chapter, you will find that the book takes on a more informational tone.

And so now I pause to offer gratitude to you, the reader, for allowing me to share my story here.

1. Sensory Herbalism

ANDROGRAPHIS
ARTICHOKE
CALAMUS
CAYENNE
GENTIAN
MARSHMALLOW
MUSTARD
PEACH
PEPPERMINT
RED RASPBERRY
ROSE

Dried Turkish rosebuds

Our Senses Are Our Teachers

Throughout the ages, people have connected with plants through sight and touch, taste and smell, and even sound. Herbalism is a sensory experience. Seasoned herbalists have learned to use their senses in a practice called organoleptic assessment to understand an herb and its healing energies better. They use their

senses to assess the quality of herbs in the field when harvesting or wildcrafting and in the kitchen when making remedies. In the herbal industry, organoleptic assessment is considered a crucial step in identifying quality plant ingredients in the manufacturing of herbal supplements.

Our senses can pick up a lot about herbs. Herbs might taste bitter or sweet or sour. Perhaps they smell fragrant, like many of the mints. Their astringency can be felt on the tongue, as with an unripe persimmon, or they may be slimy to the touch, like the gel inside an aloe plant. Sometimes herbs can even feel like they burn! They can sting or feel abrasive, fuzzy, or smooth. They can sound brittle and make rattling noises, or they can whistle in the wind. Some say you can even hear them grow if you stay still and listen. Herbalists who are highly in tune with their surroundings can sit meditatively with plants and listen to their sonic vibrations.

Clipping and sniffing: a scene from the Tacuinum Sanitatis, an 11th-century Arab medical treatise

VISION, TASTE, SCENT, AND TOUCH

Sight is usually our first point of reference for learning about an herb. Often herbalists use visible hints to keep a mental note of their associations with the plant's healing properties, in keeping with the ancient practice called the doctrine of signatures. Brightly colored wild roses are specific remedies for addressing intense heat and inflammation, and the erect stalks of calamus mirror its effects on the spine and nervous system. Tall black cohosh stems wave in the wind like healthy backbones. The purple pigments in the blueberry help mend our veins. These associations are part of the poetic lens through which an herbalist sees the world.

Through taste, an herbalist may be able to discern the action of the plant. For example, the bitter flavor of gentian root tells us that the herb might be suitable as a digestive tonic—and there is some science behind this: When bitterness washes over receptors on the tongue and along the digestive tract, a reflex action ensues, prompting the vagus nerve to send a message to the digestive organs—including the stomach, pancreas, and liver—to release digestive juices. These digestive juices welcome a meal and prepare the internal organs to participate in the breakdown and assimilation of the foods we eat. A digestive tonic like dandelion can be as simple as a bitter green salad eaten as a first course or a bitter aperitif enjoyed before dinner to stimulate the appetite. Bitter herbs like andrographis tend to support the liver, clear the skin, lower blood sugar, and wash out infections.

Preparing dried peppers for South Indian–style seasoning

A sense of smell can also help an herbalist understand a plant’s possibilities. Aromatic herbs secrete tiny bundles of compounds known as volatile oils, so lightweight that when released into the air, they float up into the nose and land upon the olfactory region, where they elicit a brain response. These minuscule compounds also diffuse through the respiratory tract, evoking a full body response via the circulatory system. Lovely aromatic herbs such as rose and lavender tend to relax the nerves and help calm the mood. Some aromatics have a more stimulating effect, including mint-family plants like peppermint, which refreshes the brain and invigorates blood flow. Topically, aromatics tend to be antiseptic and are used in wound care and antifungal treatments. A nice cup of aromatic tea like peach leaf can settle a tummy or calm an uptight disposition. Aromatics tend to relax the digestive tract’s smooth muscles, making them useful for bloating and gassiness. Their tiny, lipid-

soluble molecules pass quickly through nervous tissue and exert their soothing influence there.

Spicy herbs trigger our senses via temperature and pain receptors on the tongue and on the skin. In some cases, eating something excessively spicy can start an adrenaline burst. Try eating a too-spicy chili pepper and see what happens. Eyes start watering. Saliva flows. You break a sweat! Spices such as cayenne, ginger, or horseradish penetrate deep into our systems to break through congestion and get the blood stirred up. A topical mustard poultice can elicit healthy blood flow to an area of the body or break up deep congestion below the surface.

When an herb feels slimy or has a viscous quality, we usually refer to this as the presence of mucilage. Obvious examples of mucilage include okra or aloe, but sometimes soaking a plant in water brings out the slime. Try soaking flax seeds in water for a few minutes to see this in action. Mucilaginous herbs can be cooling and soothing to dry, irritated, or inflamed tissues. Marshmallow root in bathwater, for example, can help calm sensitive rashes. An herbalist might also recommend a mucilaginous remedy for a sour stomach, heartburn, or even constipation.

Astringent herbs like red raspberry leaf, on the other hand, have a drying quality. Astringency indicates the presence of tannins, otherwise known for their role in tanning leather and giving red wine its character. Tannins bind to organic substances and cross-link to “tighten the weave” of tissues. They make us pucker up in response to eating unripe fruit. An herbal application of rose water might thus be used to tone the skin, or a simple astringent black tea bag might be applied to a blister to help dry it out.

Leaves and flowers of several species add sensory complexity.

HERBAL ENERGETICS

Herbalists use their senses to assign simple energetic concepts to herbs that are either applied topically or consumed. Bitter tends to feel cold, and due to this trait may be used during fevers or to cool down inflammatory constitutions. Aromatic herbs tend to exhibit more of a warming quality, but in some cases, like peppermint, they are cooling. Mucilaginous herbs tend to be cooling and soothing, while spices are hot and stimulating. Astringents are described as tightening, while aromatics are used for release. These energetic, sense-driven concepts, ascertained through organoleptic assessment, integrate into the tapestry of wisdom that herbalists carry forth.

..... 1

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{ Andrographis }

Genus and Species: Andrographis paniculata
Family: Acanthaceae

A bold and bitter herb to cool and clear

An herb so bold it has been crowned “king of the bitters,” andrographis is an annual that originates from the forests and hillsides of India and Sri Lanka. It has generously spread its seed around the world, especially throughout the tropical regions of Asia. In its native territory of the Himalaya, andrographis was given the name *kirata tikta*, which means “the bitter herb of the Kirata people.” In that area’s Ayurvedic tradition of medicine, it is also called *kalmegh,* a derivative of a term for “black cloud,” perhaps referring to the approach of winter, the best time to pick the herb.

Like most herbaceous plants, andrographis is ideally harvested when it is in bloom. This leggy, square-stemmed plant produces dainty two-lipped tubular white blossoms. Its

beautiful ivory petals are flecked with plum-colored brush strokes. Remarkably, the timing of their emergence perfectly coincides with the start of cold and flu season.

THERAPEUTIC USES

Andrographis is revered for its potential immunity-enhancing properties and is often suggested at the first sign of a potential viral or bacterial infection. Studies support this use, citing andrographis’s ability to reduce the severity and duration of upper respiratory infections and improve immunity through the enhanced production of lymphocytes. The benefits of andrographis on the immune system may even extend to possible cancer prevention and anti-HIV efficacy.

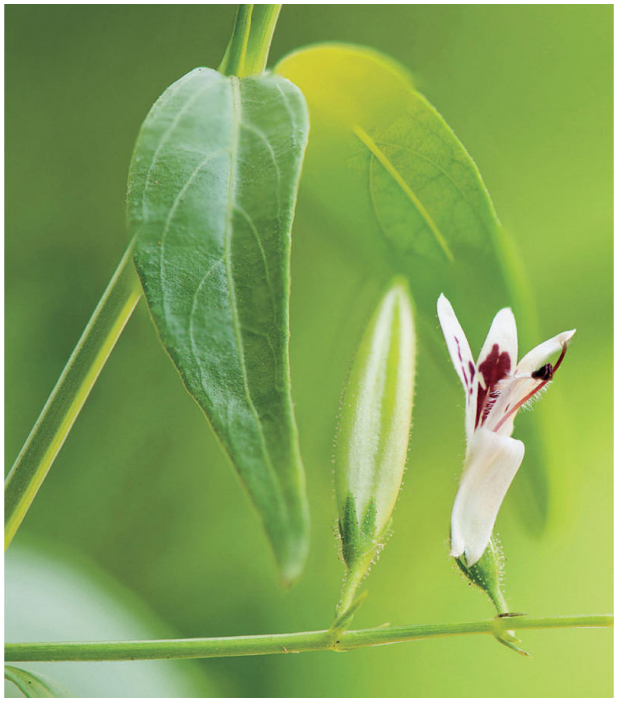
This potent herb is rich in flavonoid compounds, which may help in easing allergies and alleviating congestion. These anti-inflammatory properties suggest andrographis's usefulness to people suffering from autoimmune conditions, including ulcerative colitis, lupus, and rheumatoid arthritis. Andrographis may also promote heart health by relaxing the blood vessels, lowering blood pressure, and preventing clots.

Andrographis exerts a strong anti-infective quality and has a long tradition of use in managing fevers, especially in the case of malaria, against which the herb shows promise according to pharmacological studies. As a penetrating bitter with vermifugal and antifungal properties, andrographis can stymie parasitic growth and is even used by Western herbalists in protocols against Lyme disease.

The herb is venerated in the Ayurvedic tradition, a widely practiced system of medicine evolved from India, where it is considered cooling and detoxifying. It is used to support the digestive and urinary systems and to help clear infections and reduce phlegm. In Traditional Chinese Medicine, andrographis (known as *chuan xin lian* in pinyin) clears dampness and heat in the lungs, digestive organs, and skin.

Many herbalists appreciate the revitalizing energy of andrographis, used in response to a sense of sluggishness or the need for a detox or cleanse. Like most bitter herbs, when taken in small doses regularly as a tonic, andrographis can help protect the liver, support bile secretion, maintain healthy blood sugar levels, and clarify the skin from within.

A tea or infusion of this herb is mildly unpleasant, due to its bitter taste. Some say its bitterness on the tongue lasts throughout the day. Many prefer to ingest the powdered herb in capsule form. Because its energetic profile is profoundly cold, intense, and somewhat drying, many herbalists balance andrographis by combining it with warming, flavorful, or moistening herbs, such as tulsi basil, elderberry, or licorice root.



The flower of andrographis

What’s in a Name?

The Malays call andrographis *hempedu bumi,* or “bile of the earth,” due to its intense bitterness. Its immunoactive effect is similar to that of its well-known Western counterpart, echinacea, reflected by the nickname “Indian echinacea.” It also goes by the common name green chiretta. Another Sanskrit title for this herb, *bhunimba,* translates to “neem of the earth,” comparing it to India’s famous panacea of a tree. With so many monikers for this herb, it is critical to know its international standard binomial nomenclature: *Andrographis paniculata,* representative of its genus and species, respectively.

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{ Artichoke }

Genus and Species: Cynara scolymus
Family: Asteraceae

A food herb to improve and strengthen digestion and elimination

The stately, thistly artichoke presides over the garden via a broad silvery leaf-span and glorious crowns of royal purple inflorescence. Hailing from the Mediterranean, artichoke, known to herbalists by the elegant name Cynara, rules more than just spinach dip. Most are familiar with the delicious artichoke heart, a delicacy in the kitchen when steamed and served with a butter sauce or marinated and tossed on pizza or into salads for an ooh-la-la experience.

The fleshy artichoke heart develops in the center of the plant's large, globe-shaped bud. It takes effort to get to it, but a dedicated kitchen devotee soon learns how. The heart is tender and edible, but only before the brilliant spikes of violet flowers appear, after which it becomes too tough to

consume. At that point, the flowering stalks are best employed as a striking floral centerpiece.

THERAPEUTIC USES

Artichoke has long been considered a food fit for nobility. Catherine de Medici is said to have introduced artichokes to France in the 16th century, when she arrived from Florence to marry the future Henry II. Like the queen herself, a bitterness lies beneath the frilly hand that feeds. Artichoke leaf bestows its deep flavor to bitter Italian herbal liqueurs enjoyed in classic cocktails like the Cynar Spritz or the Bitter Giuseppe, which are often sipped prior to mealtime. These appetite-stimulating aperitifs attest to how a boldly artichoke-forward bitter flavor can be enjoyable when combined with aromatics and sweet syrups.

To the surprise of many, it is the Cynara leaf that herbalists revere. Its buttery bitterness aids all sorts of digestive maladies. A tonic of artichoke leaf in the form of tincture drops can assist in the production of digestive secretions prior to a meal. Putting artichoke hearts on a pizza might be delicious, but tasting artichoke bitters before, during, or after that rich meal can prevent trouble with nausea, bloating, heartburn, and gassiness. Some even find this remedy useful in managing blood sugar spikes after eating.

A sip or two of artichoke leaf tea is considered by herbalists to be an effective diuretic to stimulate the kidneys and as a choleretic to stimulate bile flow. Like most bitter herbs, artichoke leaf has a special affinity with the liver. In modern studies, the leaf extract has shown to be beneficial for hepatitis patients, proving to be hepatoprotective,

preventing liver damage from toxicity while helping liver cells to recover and regenerate. One study involving 100 people with nonalcoholic fatty liver disease found that those who took artichoke leaf extract daily experienced improved liver function. Artichoke leaf does have a stimulating effect on the biliary tract, so there is some caution around its use if gallstones are present.

A supplement of the leaf also has a positive effect on lipid profiles and can help bring those numbers into a healthy range. But this stabilizing effect is not limited to the plant's leaves. Artichoke hearts are packed with cholesterol-reducing fiber, proving that they are truly a heart-healthy food.

Artichoke leaves encircle the flower.

The Liver-Loving Artichoke

Herbalists often evaluate people for signs of liver malaise. An overburdened and sluggish liver can lead a person to feel lethargic and off-kilter. Bitter tonics help revitalize the liver back into a healthy rhythm. Some clues that the liver could use an herbal spruce-up can include:

- Waking up headachy and hungover, even without drinking alcohol
- Flatulence and bloating after meals
- Vague nausea after eating fatty foods
- Constipation and sluggishness of the bowels
- Pale-colored stools
- Varicosities and hemorrhoids and/or edema of the lower limbs
- Itchy skin or skin eruptions
- Redness in the face and eyes
- An irritable, cranky, and inflamed temperament

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{ Calamus }

Genus and Species: Acorus calamus
Family: Acoraceae

An ancient wetland plant to invigorate the mind and voice

Reminiscent of cattails, the reeds of iris-like sweet flag—as calamus is often called—stand tall along a murky pond's edge. The leaves, like swords, emerge directly from the horizontally creeping rhizome, out of which fibrous roots develop to anchor it in place along shallow wetlands. Calamus can be found from the boggy habitats of swamps and floodplains to the muddy edges of creeks and springs. Two features distinguish this herb from other semiaquatic brethren: a smoky lemongrass scent when its leaves are crushed, and a solitary fleshy spadix, or flower-bearing stem, holding a flat, cobbled pattern of tightly packed flowers.

Calamus grows in wild colonies in various regions across the globe. The native North American species, *Acorus americanus,* grows throughout North America, extending

south via cool mountain ranges and north across Canada. Although they are used in similar ways, this variety has distinct genetics compared with its introduced relative, *Acorus calamus,* which originated along European and Asian territories and still enjoys a wild presence there.

THERAPEUTIC USES

Like many aromatics in history, calamus was utilized as a strewing herb, scattered across the floor and placed around a dwelling for its reinvigorating freshness and ability to ward off pestilence and insects, especially fleas. The fine dust of dried sweet flag makes a fragrant and effective component of a natural flea powder for pets.

In the kitchen, the sweet-scented foliage of dried calamus adds a unique herbal hint when sprinkled into recipes. When placed on the tongue, the medicinal root produces an unforgettable sensation on the palate as its deep peppery aromatics flirt with an airy hint of bitter citrus. Herbalists consider it a warming aromatic bitter, combining the carminative and antispasmodic qualities of most aromatics with the appetite stimulation and digestive support of bitter plants. The root can be grated and used sparingly in dishes to infuse a subtle spice. For a more profound flavor experience, sips of calamus root liqueur enjoyed around mealtime can stimulate and improve digestion. In fact, the root has long been an absinthe formulator's secret ingredient, adding to the stimulating buzz of that quintessential herbal concoction.

Connoisseurs of calamus point to the herb's beguiling effects on the mind. Calamus root medicine grounds the body and can lift the veil of brain fog, improving mental clarity as well as sustaining cognition and memory. In the Ayurvedic tradition, it is known as *vacha,* or "voice," due to its power to enhance the delivery of the inspired word.

While the magical enchantments of calamus root are exalted by cultures around the world, scientific studies provide some pragmatic considerations of its value. Various pharmacological observations seem to validate calamus's constituents as insecticidal, antibacterial, hepatoprotective, and relaxing to smooth muscle.

Much investigation specifically centers around its neuroprotective properties in the prevention of memory loss and anxiety. Further phytochemical analysis focuses on its potential role as an anticonvulsant. The ethnobotanical record documents calamus root as a significant traditional herbal remedy in many regions, including North America, Asia, Africa, and Latin America: an example of what is often seen in the world of herbal medicine, as scientific inquiry builds upon multicultural traditional knowledge.

An ancient Egyptian relief shows scribes holding pens made of calamus stalks.

Jurassic Genetics

Paleobotany, or the study of plant fossils, reveals botanical insights about the history and heredity of plants over time. Through this lens, sweet flag hails from the most ancient and longest surviving line of flowering plants, the grass-like monocots, and is closely related to all of today's monocots, such as bamboo and sugarcane. Scientists studying the fossil record and analyzing evolutionary plant genetics or phylogenetics hypothesize that the genus *Acorus* goes back to the late Jurassic period. Other plants—such as ginkgo, club moss, horsetail, and various ferns—can also be traced back to the age of dinosaurs.

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{ Cayenne }

Genus and Species: Capsicum annuum
Family: Solanaceae

A legendary pepper with a medicinal kick

Paleoethnobotanical sites within South America reveal that humans have been cultivating chili peppers for more than 6,000 years. In Mexico, chili residue has been discovered in pottery fragments more than 2,000 years old. The word “chili” is derived from the Nahuatl (Aztec) word *chīlli,* meaning simply “hot pepper”; cayenne, a spicy red chili pepper, shares its name with the capital city of French Guiana. By the time Europeans invaded the Americas, chili peppers were among the most widely cultivated foods in the region, along with corn, beans, squash, and yucca.

The *Capsicum* genus represents one of the most important spice crops worldwide. The pepper (as it was named by Europeans, due to its flavor resemblance to the peppercorn) is famous for its use in spicy dishes not only in

its native Latin American territory but also in Asia, Africa, and across the globe. The paprika pepper originates from the chilis of Mexico, Central America, and the Antilles islands, where it was selected for its smoky sweetness by European spice epicureans.

THERAPEUTIC USES

Residents of the hottest climates of the world seem to appreciate spicy flavors the most. Perhaps this predilection represents an evolutionary favor; antiparasitic and antimicrobial cayenne has been traditionally consumed closer to the Equator, where pathogenic organisms thrive in year-round heat. As a bonus, those who consume hot spices experience a cooling effect once the sweating begins.

Nothing elicits a more obviously embodied organoleptic experience than the fiery chili pepper. One bite of a spicy pepper can make your senses dance a cha-cha. The aftereffects of streaming tears, running nose, drooling mouth, and spiked adrenaline can even boost heart rate and raise metabolism. The initial burning pain of chilis might feel irrevocable, but tempered use of these peppers in one's diet will cause no long-lasting tissue damage. The simple way to wash the heat away, according to research, is to follow up with sips of cool, soothing milk.

Herbalists use chili peppers in countless ways, including for kitchen first aid. Not only can a dusting of cayenne powder help curb bleeding from small cuts, but it also serves as a potent numbing antiseptic. A topical poultice of raw chili pepper or a liniment of cayenne-infused vinegar rubbed into achy joints or slow-healing ulcers can elicit a rush of invigorating blood flow, known as rubefacient activity. Many over-the-counter topicals contain capsaicin, a medicinal compound from cayenne proved to reduce the pain of inflammation and neuropathy. It is this dance with capsaicin and nerve receptors that gives cayenne many of its health benefits.

In addition, cayenne is an antioxidant powerhouse that nourishes the cardiovascular system. It may promote healthy circulation, prevent blockages from blood clots, and help strengthen blood vessels. Many studies show that spicy cayenne supplements, combined with a healthy diet and lifestyle, can induce calorie-burning metabolic effects that can support weight loss.

Chilis contain significant amounts of vitamin C. Herbalists love to add a pinch of their favorite spicy peppers to elixirs given at the onset of a sore throat, stuffy nose, or common cold. The warmth washes away microbes at the back of the throat while stimulating the flow of stagnant mucus. Spicy fresh chilis and dried chili flakes are a common ingredient in

the beloved fire cider recipes of kitchen herbalists (see here).

Aji picante

Colombian *Aji Picante*

Many people think of salsa as primarily a staple of Mexican cuisine, but Colombians have their own version of salsa—*aji picante*. In every Colombian household, it is common to keep a batch of this to spoon over potatoes, rice, soups, and empanadas. While the recipes vary from family to family, they are all based on ultra-finely diced fresh chili peppers, tomato, cilantro, and green onions in a base of white vinegar and water. Common in Peru, Bolivia, and Ecuador as well, today’s aji is said to have been passed down from Inca recipes of the Andes.

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{ Gentian }

Genus and Species: Gentiana spp.
Family: Gentianaceae

The quintessential digestive bitter for cool catharsis

Bearing bright horn-shaped blossoms in a rainbow of shades from bluish-purple to cream, gentian's bold flowers crown the top of a narrow, opposite-leafed stem. Wild gentian is as striking to look at as it is to taste. A European native, great yellow gentian *(Gentiana lutea)* is the most cited variety in Western herbalism, although it is one of many gentians used medicinally around the world. For thousands of years, many species of gentian have been revered in their home regions. All parts of the plant are used in medicine-making, though it is the fall-harvested root that is commonly made into a tincture, syrup, or even decoction.

THERAPEUTIC USES

Herbalists worldwide celebrate the classic bitter flavor of gentian. Through the ages, they have experimented with this plant, concocting artisanal elixirs and crafting medicinal digestive tonics. They might add complexity by blending in spices, aromatics, or even a touch of sweetness, but they recognize the potent source of gentian's power in its depth of bitterness.

Still, some find the bitter flavor a bit off-putting. Like the expression "a bitter pill to swallow," gentian combines the literal flavor with a challenge that may lead to a life-changing experience. Herbalists understand this nuance.

They have learned that bitter herbs such as gentian are wholly transformative: They stimulate the absorption and elimination process in both the physical and the emotional body.

Perhaps it is bitter gentian's potent effect on the liver that makes this herb so cathartic. In many traditions, the liver represents the seat of the soul, where dark emotions such as anger, resentment, and jealousy dwell. But the liver also has the capacity to self-regenerate and refresh. When healthy, the liver harbors courage, enthusiasm, and boldness. Gentian provides the motivating catalyst that is often needed to undergo this metamorphosis from stagnant to vibrant.

A little embitterment goes a long way. This taste principle of gentian root, amarogentin, has been identified as one of the most bitter natural compounds known. Small doses of energizing gentian will kick-start a sluggish system. For someone feeling listless, a good jolt of gentian is like a cold plunge. For a delicate constitution or a convalescent, mere drops of gentian root can aid in recovery, as taste bud stimulation increases salivation and boosts the appetite. For this reason, small amounts of gentian can support nourishment in both the elderly and children.

Like other herbal bitters, gentian must be experienced on the tongue to fully exert its effects as a digestive tonic. A few drops of the herb with a meal can act as a tune-up to the digestive system, preventing bloating and gassiness and promoting bowel regularity. Gentian root remedies also keep a sweet tooth in check and balance blood sugar.

The sharpness of gentian is cooling and drying and recommended for hot and damp phlegmatic conditions. A few drops of gentian have an effect similar to that of goldenseal in helping to clear stagnant catarrh or nasal stuffiness. In Europe, gentian is sometimes combined with elderflower as a sinus remedy. Indeed, it is often combined with other herbs to make it more palatable and also to warm

and soften it energetically. A little fiery ginger or soothing cinnamon can be added to help offset its arid chill.

The flower of great yellow gentian

Better With Bitters

An herbalist walks into a bar and says, “I’ll take an extra splash of bitters!” Nowhere else are the gustatory organs so refined than on the taste buds of the cocktail connoisseur. Herbal bitters often incorporate gentian root, balanced by a potpourri of spicy barks, aromatic leaves, and hints of citrus, cacao, peppercorns, and wild berries. To prepare simple infused bitters, soak a spoonful or two of select culinary botanicals, such as orange or grapefruit peel, cardamom, or fennel, along with a pinch of gentian root, in a pint jar of your favorite spirits and let the flavors infuse for two to three weeks. Strain, bottle, and label. Dispense in drops to flavor a seltzer or fancify a cocktail.

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{ Marshmallow }

Genus and Species: Althaea officinalis
Family: Malvaceae

A confectionary herb of soothing sweetness

The mallow of the marsh, known for its soothing and softening qualities, is a staple in many herbalists' gardens and pantries. As its common name implies, marshmallow is a wetland-loving plant of the family Malvaceae, whose members we call the mallows. The genus *Althaea* is derived from ancient Greek roots referring to an herb with healing power. As with other primary plant species regarded as medicinal, medieval Latin assigns marshmallow the epithet *officinalis*.

Reminiscent of the Malvaceae coterie of plants—including hollyhock, cotton, hibiscus, and okra—lanky marshmallow reaches a height of three to six feet (0.9 to 1.8 m). Its stems are flexible, and its taproots run deep, nourishing even the most disturbed soil. With five silky pale-pink petals, each

bloom looks as if it is extending out a miniature feather duster to the world.

THERAPEUTIC USES

Rub an open marshmallow stem, and you instantly sense what herbalists call mucilage. This slimy texture makes for convenient first aid in the garden or wilds: A spit poultice, made by chewing up fresh leaves of marshmallow, applied to the skin is ideal for drawing out pesky splinters or insect

stingers, and a viscous smear of the crushed leaf is soothing to scrapes, burns, rashes, and bites.

All parts of the marshmallow plant are edible. Young leaves are most palatable before they become too fibrous and fuzzy. Choice leaves can be sautéed and added to a soup for a green, earthy flavor with some thickening agency. The fresh flowers lend a beautiful aesthetic as a salad garnish. The roots have been used in old-fashioned dessert recipes for their peculiar cohesive texture and starchy, neutral sweetness.

Althaea embodies a soft and gentle energy, both in its physical appearance and in its actions within the body. The marshmallow herb is best known for the protective and soothing nature of its mucilage. Herbalists pair this cool, lush oasis of a plant with inflamed, hot, dry membranes. A simple infusion can be made in the kitchen with just powdered marshmallow root and cold water. A syrup of the root also makes a lovely, moistening remedy for irritations internal and external.

When consumed, medicinal marshmallow distributes a demulcent layer of comfort through the digestive system. Orally, it has been found to sooth tender gums and pacify raw mucosa. As it flows through the throat and esophagus, its viscosity coats the tender tissues and eases dryness and irritation, thus it may offer protection from the harsh heat of reflux and acidity. In the stomach and intestines, its jelly seems to provide a healing barrier against lesions and protects delicate ulcers from further aggravation. In the large intestine, it lubricates the bowel and supports elimination. Marshmallow root’s mucilage has a softening effect on the tissues of the urinary system and can help alleviate overexcitability of the bladder. Like other mucilaginous herbs, it is palliative for sharp afflictions such as hacking lungs or spasmodic cramps.

Marshmallow is settling to the skin as well. As a topical emollient or skin soother, a mashed poultice of marshmallow

leaves or a marshmallow-infused wash on an affected area can also settle aggravated nerves and calm the temperament. Its root enriches salves, helping them to deeply nourish and quiet inflamed skin. On the scalp, a wash of marshmallow can relieve redness and clear dandruff and itchiness.

Dried and sliced marshmallow root

Marshmallows: A History

The word “marshmallow” not only stokes a sweet tooth but also evokes an image of the fluffy gooey campfire treats of the same name. Although today’s marshmallows are no longer made with this herbal root, the history of the spongy candy is rooted in the mallow of the marsh. In mid-19th-century France, the gourmet confection was painstakingly made by hand. Marshmallow root decoction was whipped into stiff peaks with egg white and syrup to create the dessert known as *pâté de guimauve*. Recognizing the healing virtues of marshmallow, confectioners then sliced this treat into bars and sold them as medicinal lozenges.

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{ Mustard }

Genus and Species: Brassica nigra
Family: Brassicaceae

A versatile spice for detoxification

Mustard goes way back before the days of ballpark hot dogs. The mustard seed has been used medicinally since ancient times, with the condiment emerging in the heyday of ancient Rome two thousand years ago. Excavation of the Indus Valley civilization shows that mustard was being cultivated between 4000 and 2000 B.C.E.

Black mustard is regarded as the most intensely pungent of the mustards, followed by spicy brown mustard and the tangy white variety. *Brassica nigra* is the source of the famous fervently flavored black mustard seed from which common table mustard can be made. Like all plants in the edible mustard family, its flowers have four petals, two tall and two short, and six stamens. The seedpod of black mustard is long and slender; split open, it reveals rows of brownish to coal-colored seeds, collected for their culinary and medicinal uses.

THERAPEUTIC USES

Mustard elicits a hot, fiery sensation on the palate. The mustard family of plants, Brassicaceae, includes such familiar cruciferous vegetables as cabbage, turnips, horseradish, and broccoli. The stimulating piquancy of these foods is due to an enzymatic reaction of compounds known as glucosinolates, which unleash a sulfurous bite.

Mustard is perhaps best known medicinally as a home folk remedy, with mustard packs applied to areas of the body needing warmth and circulation. A plaster made of mustard flour, made by simply grinding mustard seeds, is placed on the chest to help dissolve congestion and bring blood flow to the lungs during a cold. Alternatively, a mustard powder bath can warm chilled, achy joints while supporting a healthy fever response and helping to clear the sinuses.

Laborers during the 19th century might line up for a mustard poultice to aid their arthritic joints. Old-fashioned doctors would wrap them onto patients' knees and wait for a blister to bubble up, which they would then lance. When this process improved the joints' mobility, practitioners of the day believed that toxins had been released in the fluid. More likely, temporary relief came from the increased flow of blood to the area, an action known as rubefacient activity.

Herbalists today are very cautious when using mustard topically. They recognize the important difference between cayenne and mustard: While both burn, caustic mustard can actually blister the skin and cause physical damage. Contemporary herbalists might seek out mustard's warming effects, but they keep an avid eye out for a light reddening of the area, a sign that the mustard has served its purpose.

Glucosinolates in the Brassicaceae plant family are of great interest to researchers, who often cite the cancer-preventive effects of these foods. Spicy compounds in mustard plants seem to support the body's ability to detoxify carcinogenic substances. While mustard seeds should be consumed in moderation, eating mustard greens can provide long-term nutritive and medicinal health benefits. Those with a thyroid condition should avoid consuming large quantities of raw or fermented Brassicaceae family plants, which may contribute to goiters and other thyroid issues.

Black mustard seeds

Mustards Need Massages, Too

Mustard glucosinolates need an enzyme called myrosinase to release the active medicinal isothiocyanate compounds, which provide mustard’s zesty flavor. In the raw plant, myrosinase is tucked away behind firm cell walls. When we chew mustard greens or massage them before consumption, we break down these cell walls and release the enzyme that activates their peak pungency. When cooking cruciferous veggies such as kale or brussels sprouts, make sure to begin the breakdown process by chopping and massaging them first. Let the cut veggies sit on the counter for a few minutes to allow the enzyme to finish its conversion prior to lightly cooking them. The result will be a more healthful and flavorful dish.

..... 8 .....

{ Peach }

Genus and Species: Prunus persica
Family: Rosaceae

A fruity and refreshing mild herbal sedative

Fruit aficionados worldwide cherish the luscious peach and its juicy flesh, though few are familiar with its leaf as a beloved herb and home remedy. The peach tree provides exquisite beauty throughout the year.

In the late winter, its gnarly branches adorn themselves with tiny dormant flower buds. As the warm weather of spring flirts with the residual frost of winter, some of these buds awaken and swell into delicate blossoms. When spring definitively sets in, the tree erupts in a glory of deep pink flowers. Its dark branches covered in blushing floral hues become a beacon of springtime. Soon after, bright green, lance-shaped leaves fill out the tree as the blooms begin their transformation into the succulent fruit that satisfies bakers and birds alike.

While we usually pay attention to flowers and fruit, it’s those leaves that represent this plant’s herbal gifts.

THERAPEUTIC USES

A hot summer day’s harvest of peach leaves is rewarded by their promise of cool refreshment. At first impression, peach leaves are like any other tree leaf. But shredding them with the fingers releases a telling waft of fruity fragrance. Herbalists like to steep fresh peach blossoms or peach leaves overnight in cool water, where their mucilaginous properties form a velvety cherry-like infusion, reminding us that peaches and cherries share a common plant family, Rosaceae. This cold infusion combines a sweet, grounding taste with relaxing aromatics and soothing mucilage, exquisite when replenishing parched membranes and easing mucosal irritability.

Nourishing peach leaf is specifically indicated in conditions characterized by hot and dry tissues. Its cooling, mellowing activity can help counteract inflammatory states such as fevers that dehydrate, red and parched gums, scanty or burning urination, dry or inflamed bronchitis, and tenderness or flaking of the skin. Because of its fluid and calming nature, herbalists like to use peach leaf in formulas for those struggling with histaminic allergies or autoimmune flares. Topically, a poultice of the fresh leaf or a dab of tincture can take the bite out of an insect sting or even help alleviate a boil.

Peach leaf can be safe for children, elders, and those who are expecting. As an antiemetic, peach leaf tea can even be an ally to those struggling with morning sickness. Herbal caregivers might give a restless child sips of a peach leaf infusion or drops of a peach leaf tincture for gentle belly soothing. Sensitive children with nervous tension in the tummy might feel a bit more at ease with a few drops of peach leaf tincture in their beverage.

Old-fashioned remedies also include peach leaves in concoctions meant to rid bellies of parasites. Even agitated parents may find silky relief in peach’s gentle support, as a

balm to burnt-out temperaments and wound-up or “fried” nerves. In later phases of life, peach leaf may calm the flustered heat and insomnia of menopause.

A ripe summer peach amid its bright green leaves

No Fuss, No Fuzz: Peach Leaf Cold Infusion

Choose an unsprayed peach tree with bright green leaves for your DIY infusion. The younger leaves of early summer will be brightest in flavor. Take a moment to crush a leaf between your fingers and assess the aroma. It should emit a sweet, uplifting fragrance. Harvest a basket full of leaves, then shred them either by hand or with scissors, so that each leaf is cut into four or five pieces. Place the shredded leaves in a jar until it is halfway full and top with cold water. Let the mixture sit for four to eight hours, shaking the jar regularly during this steeping period. Strain out the leaves and enjoy sipping your lightly fruity, cooling beverage.

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{ Peppermint }

Genus and Species: Mentha piperita
Family: Lamiaceae

The ultimate chill pill for deep relief

Peppermint is a staple of the kitchen garden. Like others in the mint family, peppermint plants grow easily, spread quickly, and exude a fresh scent when crushed or cut. The compounds responsible for this aroma serve the plant by warding off pests and microbes. Big pots of multitasking mint can adorn a patio while simultaneously repelling mosquitoes, making it an ideal addition to the backyard. There are some places where peppermint grows wild, especially throughout Europe and the Middle East, where it is indigenous. It thrives near streams alongside its parent species, spearmint and water mint. An intercontinental traveler, peppermint has naturalized all over the world.

THERAPEUTIC USES

Peppermint is best known as a cooling aromatic herb. Its leaves are used medicinally, and a volatile oil can be distilled from the aerial parts of the plant. This essential oil is used in minute, carefully applied doses for its uplifting aromatherapeutic qualities in acute situations both topically and internally.

The primary constituent associated with the familiar peppermint scent is the volatile compound menthol. The menthol in peppermint activates cold receptors (thermoreceptors) on contact, leading to sensations of cold or numbness. A simple home remedy of peppermint tea can be added to a tepid bath or made into a refreshing mist to help cool the pain of sunburn or the irritation of bug bites. A spray bottle of minty mist in the cooler comes in handy on camping trips or long days in the heat when a chilled spritz can provide wonderful relief.

The effects of this calm-and-cool herb are more than skin deep. Icy peppermint is useful in balms and salves designed for muscle aches and pain. Peppermint oil (always diluted in a carrier oil such as olive oil) dabbed on the temples may also alleviate tension headaches and increase mental clarity. Research indicates that the topical use of peppermint promotes blood flow to capillaries under the skin, similar to the rubefacient activity of warming spices.

To unwind after a meal, turn to a cup of peppermint tea. The herb can prevent nausea from ingesting heavy, fatty foods and contains compounds that relax the smooth muscle of the digestive tract, alleviating bloating and allowing air to pass. Herbalists refer to this gas-relieving action as carminative activity. Peppermint can also relax a borborygmus, or churning, stomach. In severe cases, enteric-coated capsules of its essential oil are taken as an antispasmodic for painful irritable bowel conditions. The effects of peppermint are so strong that its oil comes with a few caveats. It is to be used with caution in people with heartburn, because it can over-relax the gastroesophageal sphincter and aggravate reflux, and it is considered too potent for use in babies and very young children.

Peppermint has a tempering and grounding energy. With yarrow and elderflower, it is part of a traditional herbal trilogy given in a warm tea to help cool a fever. Here, peppermint serves as a diaphoretic, dispersing heat to the

surface and eliciting a relieving sweat. Inhaling the tea's minty steam can help break up phlegm in the lungs and open the sinus passages. A chest rub rich in menthol is a common household remedy for coughs and congestion.

Fresh sprigs of peppermint

Minty Morphology

The mint family, known to botanists as Lamiaceae, includes thousands of aromatic species, including many of our culinary favorites such as sage, oregano, lavender, and basil. Aside from their scent, mints can be recognized by other standard features such as square stems and opposite leaves. The former name of this family, Labiatae, refers to the bilabiate (two-lipped) structure of the flowers. Flowers in the Lamiaceae family have two lobes forming the upper lip and three lobes forming the bottom lip, which provides a perfect little pedestal for bees. In this poetic morphology, we get the sense that the flowers are ready to send a little kiss to a waiting pollinator.

..... 10 .....

{ Red Raspberry }

Genus and Species: Rubus idaeus
Family: Rosaceae

A classic astringent tonic

Raspberry species occur around the world, with varieties of the deciduous spiny red raspberry shrub *(Rubus idaeus)* found across Europe and North America. Often characterized by dense tangles of prickly arching canes, they grow to between three and five feet (0.9 and 1.5 m) tall. While the base stems can be woody, the twigs at the tip are more tender and appear reddish green. The leaflets—textured and paper thin, toothed, and heavily veined—are vibrant green on top and silvery-white underneath.

Five-petaled white flowers about half an inch (1.25 cm) in diameter emerge from second-year side shoots in small clusters. These blossoms give rise to the multiseeded red fruits that we prize. Red raspberry shrubs flower between May and July, with the berries ripening in late summer. The weedy, barbed shrub grows in thickets, along rivers, and in old fields and forest edges, as well as in disturbed areas.

They are one of the first plants to regenerate in a cleared forest.

THERAPEUTIC USES

Many parts of the raspberry bush are considered useful medicinally. The berry itself is dense in antioxidants, which are rich in healing benefits. As with other plants in the rose or apple family, many of the medicinal characteristics are based on the plant's astringency. The roots and leaves of the red raspberry shrub highlight this astringent, tissue-toning quality and can be employed in any circumstance in which there is a need for drying or tightening.

When freshly prepared and carefully strained, raspberry leaf and root tea can make an excellent eyewash to reduce secretions, bind the membranes, and prevent infection. Topically, a poultice or wash of raspberry can be applied to

reduce the weeping ooze of rashes, ulcers, or blisters as well as to begin to seal minor wounds, burns, and scrapes. A gargle of raspberry leaves is also useful for raw sore throats or irritations of the mouth such as canker sores. Internally, preparations of red raspberry leaf can be taken for diarrhea and appear to be safe for all ages. A raspberry root or leaf tincture, on the other hand, is convenient and makes a good travel companion when experiencing digestion and elimination troubles abroad.

Red raspberry leaf earns most of its healing reputation as a nourishing, supportive herb for all aspects of the menstrual cycle, fertility, and reproductive health. It is nutritiously dense and considered a plentiful source of iron, magnesium, and calcium, among other minerals and vitamins. Red raspberry leaf might therefore be considered important in the support of any maladies of menstruation, including cramps, heavy bleeding, and even PMS.

Infusions of red raspberry leaf can be taken as a health tonic in all stages of pregnancy. Many midwives consider it useful in preventing miscarriage and easing the symptoms of morning sickness in early pregnancy. Birthing attendants across traditions recommend red raspberry leaf to strengthen the uterus in preparation for labor, aid in the prevention of bleeding, and assist the uterus in its recovery and return to a normal shape and elasticity postpartum. Red raspberry is also a useful herbal ally when nursing a baby and has a reputed effect on amplifying and enriching milk supply as well as boosting nutrition and enriching the blood.

Tender young raspberry leaves

Bears in the Berry Brambles

Berries are a favorite of bears, so look out for trampled areas and the unmistakable scent of bear among patches of raspberry canes. When frolicking among berry brambles, be cautious to avoid getting pricked by the bristles. When harvesting the leaves of unsprayed red raspberry, choose a dry day as they lose moisture slowly; either handle them very delicately or wear gloves. The leaves are best harvested in the late spring, just as the flower buds begin to emerge. In general, just before the flowers bloom is the optimal time to gather most medicinal leaves, when the energy of the aerial (aboveground) parts of the plant is said to be at its peak.

..... 11 .....

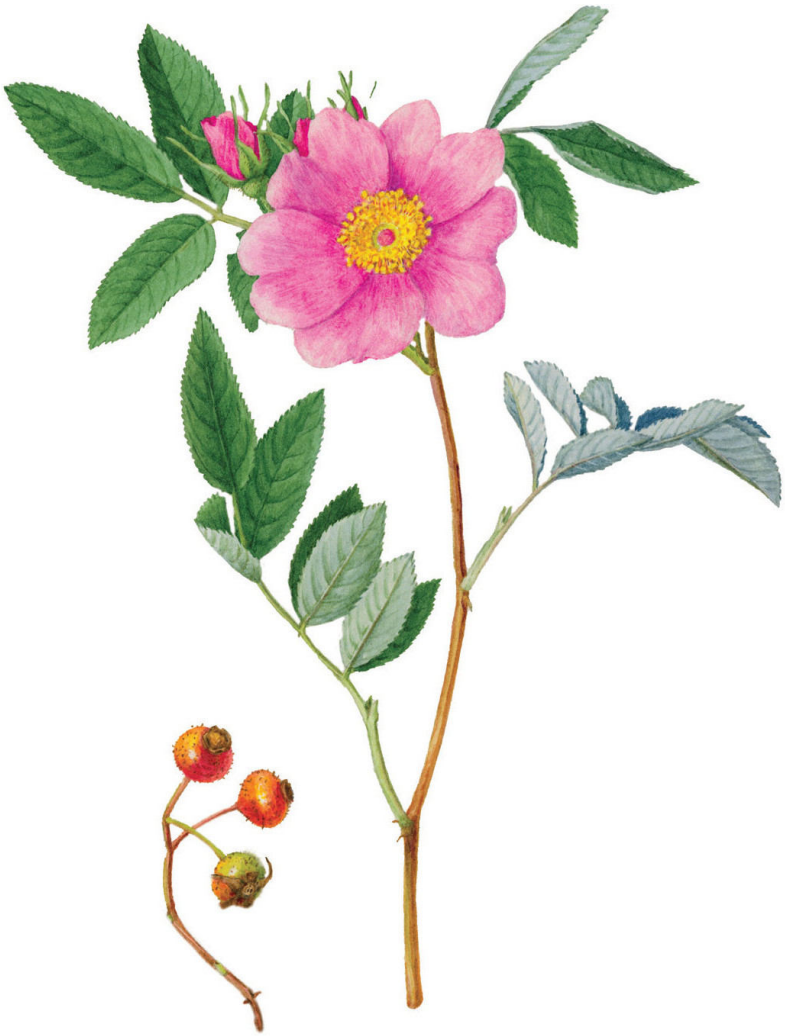
{ Rose }

Genus and Species: Rosa spp.
Family: Rosaceae

Calm and grace for mind and body beautification

Nothing enchants an herbalist's senses as much as breezy morning air perfumed with the storied aroma of the beloved rose blossom. And nothing wakes the herbalist from the trance of rose's floral intoxication more than the prick of its thorn. The paradox of rose's invitingly velvet petals and alluring scent juxtaposed with its defensively armored stem poetically symbolizes the coexistence of inner softness and outer protective strength. No other flower radiates the sentiment of love and healing to the degree of the rose, which has permeated the human imagination and desire since well before it was cultivated. Rose awakens the wild senses and connects its observer with the beauty and natural wonder around them. Like an arbor into a wondrously secret garden, the rose is a gateway into the profound and sensual world of herbalism.

There are hundreds of species in the *Rosa* genus of the plant family Rosaceae, multiplied by a tremendously wide spectrum of colorful cultivars. Roses are woody perennials. Many of them grow as shrubs or spread by trailing or climbing. The simplest of wild roses are fragrant flowers with five petals surrounding a visible center of many stamens. As the petals fade away, the head yields a fleshy, fruity rosehip. More complex garden-variety roses have multiple rows of petals in a lush blossom that often hides the reproductive area and produces no hip.



THERAPEUTIC USES

Rose medicine is used to pacify grief. It is thought to open the spiritual and emotional heart while clarifying boundaries—qualities that perfectly symbolize its physiological activity. Heart-nourishing flavonoids such as quercetin abound in the rose plant, while its definitive astringency tones blood vessels. Its graceful aroma elicits calm via the parasympathetic nervous system while tending to lower blood pressure. Overall, rose is considered soothing to a heated disposition.

Medicinally, the energetics of rose are cooling and drying, due to its astringent nature. These qualities give us a range of topical applications. A mist of rose water can dramatically placate a mood and quell inflammatory uprisings. A light spritz directly in the eyes can relieve itch or irritation. Rose-infused vinegar offers refreshment when splashed on a sunburn, and a compress of this fluid applied to the forehead is specific for sun-induced headaches. A rose infusion can make a lovely sitz bath for hemorrhoids or genitourinary issues. Rose poultices are also helpful on weeping rashes. A rose lotion is healing panacea and a vulnerary for inflamed skin. Rose contains an assortment of anti-inflammatory and antioxidant compounds that may help keep the skin, the joints, and the heart youthful; it is valued in anti-aging tonics.

The delectable honey of roses, once officially included in the United States Pharmacopoeia, was an astringent honey concoction touted for imparting a lovely flavor and scent to otherwise unsavory herbal formulas and deemed useful for mouth ulcers and sore throats. Equally ambrosial is the ancient Indo-Persian recipe for *gulkand*. The epitome of exquisite indulgence, this sweet rose preserve is an important remedy in Unani (Arabian or Islamic) and Ayurvedic (Indian) herbalism, eaten by the spoonful as a rejuvenating coolant for various heat-associated afflictions. It may also be suggested for digestive acidity,

dysmenorrhea, and nosebleeds, and as a tonic for summertime skin ailments.

Rose petals, beautiful and edible

Eating Rose Petals the Indian Way

All that is required to make an authentic gulkand—an edible rose petal concoction—are sugar and fresh, fragrant, unsprayed rose petals. Traditionally, pink Damask roses are used. The rose petals are gently rinsed, patted dry, torn into pieces, and arranged layer by layer in a glass jar, with sugar sprinkled between each layer of petals, until the jar is almost filled. Put a lid on the jar and let it sit in the sun for a week, stirring each day with a clean spoon. After a few days, the sugar dissolves and melds with the petals. The concoction will turn a reddish-brown color, indicating it is ready to enjoy.

HERBAL HERITAGE

Traditional Chinese Medicine

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Herbalists worldwide use their senses to understand the properties of herbs. Perhaps no system is as sense-oriented and sophisticated as that of Traditional Chinese Medicine (TCM), however. TCM has evolved over at least two millennia and remains firmly embedded in its culture as a primary form of healing, one which is now synergistic with science-based medicine. In China, TCM is accessible to everyone and is embraced by rural homesteaders and modern metropolitan hospitals alike.

The tradition has expanded as practitioners around the world have been called to study this elegant system, which includes a broad range of healing modalities. The fabric of TCM is woven together with the needle of acupuncture and represents a sensual landscape characterized by the aromatic warmth of moxibustion (therapeutically burning dried mugwort near the skin), the dynamic movements of qigong, and the gentle energetic flow of tai chi. Herbs like schisandra berry *(wu wei zi)* and kudzu blossom *(ge hua)* lend their vibrant qualities to the tapestry that is TCM.

The TCM canon is rooted in the observations of ancient hermits who practiced martial arts and breathing techniques and gained a complex understanding of the organs as well as a discernment in the qualities of herbs and foods. This body of work has been nurtured by herbalists and scholars

over the generations, and today TCM represents one of the most widely used forms of medicine globally.

QI, YIN AND YANG, FIVE ELEMENTS

Traditional Chinese Medicine perceives disease through a unique lens that considers harmony, balance, and organization integral to health. The central thread of TCM is the life essence, or qi, the unseen force which runs through the body’s invisible highway of meridians, or paths of energy flow. In TCM, life is movement and change is constant. Blockages and stagnation can impede the flow of qi, which can interrupt life’s essential dynamism.

Balance is curated with reverence for the fundamental principles of yin and yang, which exemplify the complimentary duality of the energies of the universe within each of us. In its most simplistic form, yin is cold, heavy, slow, and stagnant. It is deficient, inward, and peaceful. Yang is hot, light, fast, and lively. It is excessive, outward, and agitating.

A drawing from a 1620 edition of The Yellow Emperor's Classic of Internal Medicine—the oldest known document of Traditional Chinese Medicine, dating

back some 2,000 years—depicts qi pathways in the body.

Yin and yang are opposites, yet they are still in motion together. In our lives, health, and bodies we are constantly balancing the two, always shifting between deficient or excess yin and yang. Many factors, including the natal and ancestral life essence known as *jing,* influence this equilibrium, from stress or infection to poor diet or pollution, and from emotional hardship to injury. Imbalance between yin and yang disrupts the flow of qi and manifests in illness. The underlying philosophy of TCM is to restore this equanimity and promote healthy flux, thus alleviating sickness.

The yin and yang philosophy is further refined into a gracefully complex model of nature as composed of five elements: wood, fire, earth, metal, and water. In TCM, everything cycles through these five elements, creating an intricate paradigm that describes the relationships and interactions between everything on Earth. Stages of life, seasons, and times of day flow through these elements. Yin and yang vacillate through each of the elements as well. Fire corresponds to summer, which connects to full yang. Water correlates to winter, which indicates full yin. The organs of our bodies are also given designations within the chart of five elements.

PRINCIPLES OF TCM PRACTICE

A skilled TCM practitioner makes a series of observations about a patient, evaluating a wide range of phenomena. The four pillars of diagnosis in TCM are a tribute to the senses: inspection (sight), auscultation (sound), olfaction (smell), and palpation (touch). From the pallor of the skin to the beat of the pulse to the dampness on the tongue to the wind in the lungs to the fire in the belly: The patient is seen as a culmination of factors. From these observations, an

elemental story emerges that describes an individual's constitution. This constitution can be characterized by both yin/yang and elemental terminology. A patient can run cold, damp, and stagnant (excessive yin) or dry, hot, and stimulated (excessive yang), for example. Generations of observers have assigned the five elemental classifications to herbs and foods, which also have designated energetics based on their flavor. Five flavors have been traditionally identified: sweet, salty, bitter, pungent, and sour. Schisandra berry is a unique herb used in TCM that includes all five of these flavors. From the TCM perspective, foods and herbs inherently elicit a variety of sensations. Not only can they be heating like ginger, cooling like andrographis, or even neutral like shiitake, but they can also feel stimulating or stagnating. They can moisten or dry, tonify or deplete.

Medicinals used in Traditional Chinese Medicine range from plant roots and seahorses (upper left) to cuttlefish bone and earthworms (center).

The basic principle is that herbs and foods either cool or heat the body, thus easing a symptom emerging from an

overly hot or overly cold constitution. For example, someone suffering from rheumatic chills and aches that are exacerbated on damp days might find relief from an herbal formula that is drying and warming.

TCM also assigns yin and yang principles to herbs and foods. Ingredients with a cool nature are considered yin to a varying degree, while warm herbs and foods are deemed yang. Flavors such as sour, bitter, and salty are yin and cooling in nature, while flavors including sweet and pungent are yang and warming. Each flavor corresponds to a different element and to an organ system associated with that component. The spleen is associated with a sweet taste, the heart with bitter, the liver with sour, the lungs with spicy, and the kidneys with salty.

Black mushroom, a medicinal in the TCM tradition

The flavors and tastes of herbs are intricately connected to their medicinal activities through TCM five flavor theory. In *Western Herbs According to Traditional Chinese Medicine,* Thomas Avery Garran notes, “When considering the five flavors and qì of herbs, I considered not only the actual taste as it occurs in the mouth, but also the physiological response each herb produces in the body. I am trained in the culinary arts, and the idea that the flavor of an herb can

suggest something about how it acts physiologically has always intrigued me.”

Herbs Valued in
Traditional Chinese Medicine

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ASTRAGALUS
Astragalus membranaceus

TEA
Camellia sinensis

KUDZU
Pueraria montana

SCHISANDRA
Schisandra chinensis

SHIITAKE
Lentinula edodes

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2. Kitchen Herbalism

BLUEBERRY
CABBAGE
CACAO
CINNAMON
CRANBERRY
FLAX
GARLIC
GINGER
OREGANO
PRICKLY PEAR CACTUS
SHIITAKE

Vibrant herbs and spices, including turmeric, rosemary, peppercorns, thyme, and marjoram

Herbalism Begins at Home

To step into an herbalist’s kitchen is to be invited by a familiar embrace of aroma, taste, and tradition. The kitchen represents that sacred space where food and medicine ways are handed down from generation to generation. It is the table where doting elders whisper secret

recipes to their next of kin over loose-leaf tea. It is the soul of the home where a community gathers to swap joys and grievances. And it is the healing realm where caregivers shed tears and share remedies while stirring endless pots of life-restoring broth. No hearth is as warm and welcoming, as heartening and humbling, as an herbalist’s kitchen.

The kitchen is to the herbalist as the studio is to the artist. Many herbalists find the kitchen the central hub of their craft, where creativity and care meet practicality and skill. A pantry row of apothecary jars bursting with a rainbow of leaves, roots, flowers, and fruits serves as the painter’s palette of the herbarian who masterminds aesthetic, flavorful, and medicinal concoctions with what’s in the garden (or the wilds) for whatever ails.

Health and wellness always begin with food. The homesteading herbalist is a brilliant curator of kitchen space, maximizing herb drying by hanging rosemary bundles, filling a sunny windowsill full of infusing calendula oil, and rotating a cast of beloved seasonal recipes left to bubble away on the stove. Give a kitchen herbalist bitter, soil-clad burdock roots and witness the alchemy of food preparation in a way that makes even the most biting remedy accessible, effective, and even tantalizing.

An Indonesian farmer prepares fresh greens for sale.

VARIETY IS THE HERB OF LIFE

The average grocery shopper relies on the same repetitive pattern of staple foods week after week. But much of our widely available produce has been selectively bred to yield a reliably higher sugar content, devoid of color, fiber, and nutrition compared with its heirloom ancestors. Every seed, fruit, leaf, or root we consume has the potential to offer a buffet of phytochemicals and nutrients from which our cells draw life. Exposing the body to a wide spectrum of nourishing molecules is the way to maintain optimal health. By reaching year-round for the same 10 fruits and vegetables, we limit our cells' menu options. Exploring many different whole foods and learning about locally and seasonally grown foods in your community catalyzes health. Peppering that diverse diet with an assortment of culinary herbs and spices adds a powerhouse of phytochemical energy to the mélange of life's meals.

HOW DO WE SEE OUR FOOD?

One of the easiest things to do to boost health and longevity is to consume a myriad of naturally colorful foods. Each dinner plate is a blank canvas, and the cook's artistry is expressed by a rainbow of shades, from tomato slices to sautéed red cabbage to blueberry jam. Adorning our plates with splashes of red and purple provides a heart-supportive range of healthy antioxidants. Strokes of orange and yellow, such as carrots and squash, add flavonoids that prevent aging and inflammation. A splatter of bold pigmentation from spices like paprika or edible flowers like violets provides the final touch. Being intentional with the colors you eat is a challenging but rewarding game for the eyes and the taste buds.

Familiar kitchen spices, whole and prepared: cinnamon, nutmeg, and ginger

KITCHEN REMEDIES TO THE RESCUE

The kitchen offers us an array of time-tested, science-vetted ingredients to fend off common ailments from wounds to fevers. Being able to use what you already have on hand is empowering, practical, and convenient. Slice your finger? Sprinkle cinnamon on the cut—it may slow the bleeding. Long road trip? Pack a cooler of homemade ginger soda for the kids to ease car sickness. Feeling a troubling tickle? Nip the symptoms of a sore throat in the bud with a shot of honey-sweetened fire cider. Hungover? Try some beet juice. Having a bout of gout? Load up on celery. Itchy skin? See if an oatmeal sponge bath soothes you.

GIVE GREENS A CHANCE

Getting creative with eating greens means more than just a side salad at lunch—although those salads can be as much about the accessories as about the lettuce: Sunflower, pumpkin, and hemp seeds; flax oil; strawberries; purple carrots; sprouts; and edible blooms such as nasturtium and red clover add their own nutritional profiles to a salad. Flavorful pesto, which can be made with just about any edible green, can incorporate healthy amounts of immune-stimulating garlic, cognition-boosting nuts, and heart-healthy olive or hemp oil. Think beyond basil and throw in dark leaves of kale and mustard, and even foraged greens like dandelion leaves, chickweed, or blanched young stinging nettles. The peak vitality of any dish is improved with the addition of a few fresh, fragrant culinary herbs: Classics such as thyme, oregano, or sage can have tremendous medicinal properties that match their savor. Sprouts are an easy DIY kitchen project, satisfying to grow in just a few days and then to enjoy as mini green nutrition-packed sandwich or salad toppers.

Favorite kitchen herbs, including rosemary, parsley, bay leaf, and thyme

FOOD EQUALS MEDICINE

A kitchen herbalist thinks of food as medicine. Getting to know which herbs represent both healthy foods and medicines can uplift one’s health, increase one’s self-sufficiency, and connect one more closely to the world of nature. Those who incorporate herbs and kitchen remedies into home health care are gifted in their ability to take care of themselves and others. Sharing the bounty of the herbal kitchen with family and friends fosters access to healthy foods, cooking spaces, and food preparation skills for those at all ages and stages.

Kitchen herbalism builds community and strengthens families. Coming together around cabbage could mean developing fun new ways to eat veggies, or gathering around ginger might look like concocting a spicy solution for tummy troubles. One way to put kitchen herbalism into practice is to organize an herbal potluck with friends or to schedule a wholesome food-as- medicine family night. Herbal gatherings set the stage for learning and sharing wisdom and expanding the palate. Food is the great connector; herbal dishes only add interest and richness to the cooking and eating experience. And every gift of kitchen herbalism you share brings increased health and vitality to the recipient.

12

{ Blueberry }

Genus and Species: Vaccinium spp.
Family: Ericaceae

A superfood for boosting brainpower and lengthening life

Every summer, blueberries' bell-shaped flowers morph into tiny green globes and ripen into mouthwatering sapphire fruits. Herbalists can never get enough of this nutrient-dense, equally sweet and tart wild food.

Many parts of the world boast edible blueberries. Whether it's an Alaska bog blueberry, a European bilberry, or an Andean *mortiño,* this section applies to the vast diversity of blue-hued berries of the *Vaccinium* genus. Although not all *Vaccinium* berries are sweet, they are all edible. And though not all berries of this genus are blue (see Cranberry, p. 62), this section is devoted to common edible blueberries around the world.

THERAPEUTIC USES

Many herbalists, doctors, and nutritionists agree that almost everyone would be healthier if they ate more blueberries. There’s even a nickname for the rash of clinical trials on the anti-inflammatory actions of this fruit: the wild blueberry intervention. In lab tests designed to quantify antioxidant status, wild blueberries top the charts. In herbal medicine, the blue-red-purple spectrum of plant pigmentation known as anthocyanins packs a serious antioxidant punch.

Blueberry anthocyanins have been found to stabilize the collagen in our skin and blood vessels, keeping our

epidermis glowing and our cardiovascular tone agile. Berries can also be a strengthening tonic for fragile veins. A daily dose of berries is pregnancy's best friend and helps avoid varicosities. A poultice of slurried berries can be used topically to cool sensitive irritations such as hemorrhoids or spider veins, or to nourish raw, red gum tissue. Pop a frozen blueberry into the mouth and press it to ulcered gums for cooling relief and repair. A child with a canker sore or lost tooth will happily comply.

Blueberries are the original brain food. A 2014 literature review published in the journal *Neural Regeneration Research* examined dozens of studies and found that anthocyanins in berries can encourage blood flow to the brain and boost memory and learning capacity in both children and elders. Anthocyanins can also protect our DNA from damage and prevent cholesterol from oxidizing, making them a cancer preventive and a heart-healthy fruit.

Sweet, yet with a low glycemic index, high in fiber and low in calories, the antioxidant status of blueberries means they may be beneficial for insulin sensitivity and glucose metabolism, making them the perfect snack for those with blood sugar issues. Blueberry leaf tea has benefits similar to those of the berry itself. The refreshing, slightly astringent beverage is caffeine-free but loaded with catechins, or plant compounds high in antioxidants, similar to those in green tea. Blueberry leaf tea can nourish the pancreas and liver and is especially good for those with type 2 diabetes.

Inflammatory "flares" of any kind warrant the wild blueberry intervention. Whenever the body slips into inflammation, depression, infection, damage, or pain, eating blueberries can be beneficial, taking the edge off the acute cycle of injury and irritation. Antioxidants work against free radicals, highly reactive molecules known for instigating inflammatory processes and unraveling healthy tissue. Blueberries can scale back the fuel of inflammation and spare our tissues some of the inevitable wear and tear of

time. Whether it’s a daily handful of fresh, dried, frozen, or even powdered blueberries, there are myriad ways to get your fix of true blue.

Blueberry fruits

Brainy Blueberry Smoothie

Smoothies are a wonderful way to add targeted nourishment to your day. A brain-boosting blueberry smoothie will help boost cognitive power for hours of focus and concentration. Start with frozen blueberries in the blender and get creative from there, adding almond milk, chilled green tea, kefir, or yogurt to achieve your desired consistency. To boost nutrition, add a spoonful of flax or hemp seeds, both rich in brain-supportive essential fatty acids. For optimal fuel and sustenance, add a scoop of your favorite protein powder. This yummy kick-starter is perfect for students on their way to school or for adults and elders who want to keep their thinking caps in top-notch shape.

{ Cabbage }

Genus and Species: Brassica oleracea var. capitata
Family: Brassicaceae

Versatile vegetable and kitchen medicinal

Grown widely in gardens and greenhouses, cabbage erupts in a distinctively generous layered head of light green leaves. The unpretentious cabbage is one of the humbler medicinal ingredients in the kitchen and has earned its pragmatic place throughout culinary history as one of the most accessible and affordable foods worldwide.

THERAPEUTIC USES

Cabbage exemplifies the “eat your vegetables” directive, containing an assortment of critical nutrients including vitamins C and K, beta carotene, and fiber. It is rich in potassium and often recommended in diets meant to support the kidneys and healthy blood pressure. This modest brassica has gentle diuretic properties and can help reduce edema and water retention. Fresh cabbage juice, when taken for a few days in a row, is an old remedy believed to help heal ulcers in the gut. Many people swear by the broth of cooked cabbage for the alleviation of digestive pain and spasm. Fermented preparations such as sauerkraut and kimchi are loaded with beneficial bacteria that support gut health and immunity.

Most folk remedies using cabbage recommend that the leaves be shredded or crushed prior to use to “release the juices.” Scientifically speaking, the traditional practice of crushing the leaves does actually potentiate the healing properties of cabbage. Like mustard, cabbage contains glucosinolates, a type of glycoside that needs to undergo an enzymatic reaction in order to yield its active compound. In cabbage, the glycosides react with enzymes only after cell walls are broken down so that the two compounds can mingle, creating an active constituent known as sulforaphane. Sulforaphane is one of the compounds that gives cabbage its sulfuric zing.

Cabbage has had a long reputation as a folk medicine of sobriety. Today, it remains a popular remedy for preventing and curing hangovers. Sulfurous compounds within it, including indole-3-carbinol, have a significant effect on the body’s detoxification process. They boost the liver’s production of the powerful antioxidant glutathione, which supports hepatic detoxification pathways. This type of detoxification has been found to be hormone-balancing and anticarcinogenic, with a 1996 review from the Netherlands showing cabbage intake to be most associated with lowered cancer even compared with other brassica vegetables. Frequent consumption of raw or fermented cruciferous vegetables may be goitrogenic and cause thyroid imbalance, however, so caution is advised for people with thyroid conditions.

Topical compresses of cabbage leaves are traditional among folk herbalists for a variety of applications. Shredded fresh cabbage is antimicrobial and thus can make a convenient poultice for wounds, burns, sores, and blisters that are slow to heal. The glucosinolate derivatives present in cabbage are rubefacient and draw blood flow to a localized area, which expedites healing.

For those who are nursing, midwives recommend taking chilled or frozen cabbage leaves, breaking them down by

hand to crack the leaf veins, and applying them onto sore or mastitis-stricken breasts. This treatment can also reduce the fullness associated with engorgement and can ease the weaning process.

Cabbage leaves are also useful when applied to inflamed, swollen, bruised, or achy joints. The whole leaf can be crushed with a rolling pin and placed directly onto the afflicted area or wrapped in place with a bandage. The cabbage exerts an anti-inflammatory action that may promote blood activity to the area, helping alleviate pain and stiffness.

The swirls of a growing head of cabbage

The Story of Sour Cabbage

A bumper crop of cabbage tends to arrive in the fall months as the weather is cooling down. To keep cabbage available through the winter months, it

was traditionally preserved through fermentation. While many people consider sauerkraut (a German word meaning “sour cabbage”) to have originated in Germany, evidence actually points to the fermentation of cabbage occurring during the construction of the Great Wall of China, where laborers relied on sour cabbage to survive the long, harsh winters. High in vitamin C, sour cabbage historically prevented scurvy when fresh fruits and vegetables were unavailable. It remains a fantastic source of vitamins and probiotics today.

14

{ Cacao }

Genus and Species: Theobroma cacao
Family: Malvaceae

Bodily bliss in a bean

Nature's original box of chocolates begins as an unsuspecting melon-shaped pod growing on an Amazonian tree. Crack one open to reveal an interior lined in silky white flesh filled with shiny rows of individually wrapped, almond-shaped "beans." Split a bean, and its insides resemble a heart with deep aubergine-colored ridges.

These unassuming beans are actually cacao seeds, sought to craft what is arguably the world's most decadent substance, chocolate. Those acquainted with cacao picked fresh from the tree know that even the smooth white pulp surrounding the seed is delectable. Just one taste of this heavenly ambrosia confirms why this Mesoamerican fruit has long been known as the food of the gods.

Like a wise sage, the cacao tree can live up to a century. This understory evergreen, a member of the Malvaceae family, is a distinguished presence in the tropics with its

stout and gnarly trunk and bark adorned with patches of lichens and moss.

Clusters of flowers, each no larger than a thimble, pop out from the tree’s trunk and oldest branches in a phenomenon known as cauliflory, meaning a plant whose flowers and fruit emerge directly from the trunk. Unbelievably, these minuscule flowers and short stalks live to bear fully grown fruit the size and shape of a football. This enticing prize ripens into various shades of red, purple,

orange, or yellow, an ultimate delicacy hanging within arm’s reach.

THERAPEUTIC USES

While the fresh juicy pulp is savored by members of the local forest community, it is the cacao bean itself that has become a global legend. Beyond chocolate’s role in candy and commerce, herbalists and researchers value the profoundly nourishing aspects of this unique seed. A review by researchers at Ball State University, published in 2013, found multiple studies that point to cacao’s heart-healthy benefits, including improvements in blood pressure and cholesterol and reduced risk of heart disease, stroke, and diabetes.

At the root of its activity is a powerhouse assortment of antioxidant flavonoids, which tone the blood vessels and encourage optimal blood flow. One effect of these cardiovascular-loving constituents is clarity of mind and remarkably increased ability to be present in the moment. Nutrient dense, iron rich, and high in magnesium, chocolate feeds not only the blood but also the brain and the nervous system, allowing its imbiber to think clearly and respond with easy receptivity.

In herbalism, chocolate partnered with other herbs becomes a synergistic carrier and potentiator. Recipes melding herbs such as ginger, cayenne, or kava kava with medicinal chocolate confections are as limitless as the creative imagination. In fact, dark chocolate plays a role in the endocannabinoid system of the body, making its indulger more attuned to molecules of bliss. It’s no wonder that a box of chocolates is the universal gift of love.

On this Mexican vase, created between 600 and 900 C.E., a male servant offers highly valued cacao.

Mexican *Champurrado*

Mexican *champurrado* is a simple, nourishing chocolate drink steeped in Indigenous tradition. The Aztec of Mesoamerica concocted the beverage by simmering roasted cacao nibs, crushed pieces of the bean, together with atole, a type of cornmeal made from hominy and water, to make a porridge-like chocolate beverage. By itself, the thick atole drink was said to give sustenance—but adding cacao infused it with power and magic. Champurrado survives as a traditional drink in Mexico today, modified by other cultures to result in drinks such as the Philippine variant *champorado,* made with rice instead of corn.

15

{ Cinnamon }

Genus and Species: Cinnamomum spp.
Family: Lauraceae

A warming bark that makes sweet medicine

Culinary chefs and kitchen herbalists alike are enamored with the distinctively aromatic spice ground from the inner bark of the cinnamon tree. Most are familiar with dusky, bold, and spicy cassia *(Cinnamomum cassia),* which originates from a tree native to China, but Ceylon cinnamon *(Cinnamomum verum)*—lighter and more delicate in flavor, aroma, and color—comes from a tree native to Sri Lanka and southern parts of India. It is considered the "true" cinnamon among connoisseurs of this arboreal ingredient.

Cassia and Ceylon cinnamons can be distinguished not only by their fragrance but also by the way the sticks, or quills, of tree bark curl up on themselves upon being harvested in short chunks. Cassia quills usually contain only one or two layers of thick inner bark, and they are woody

and firm. It is difficult to break a cassia quill with your bare hands. True Ceylon cinnamon quills, however, are composed of many paper-thin sheets of inner bark curled up on each other. They are fragile and easy to shred with your fingers.

THERAPEUTIC USES

Both varieties of cinnamon are classic potent aromatics, possessing a warming, carminative, astringent quality that makes the herb suitable for a range of stomach ailments, including flatulence, diarrhea, colic, and nausea. Cinnamon has traditionally been used to check menstrual flooding and to prevent menstrual chills and cramps. It is also used to alleviate excessive uterine bleeding postpartum.

When exposed to water, cinnamon’s healing tannins and soothing mucilaginous qualities emerge. Herbalists add cinnamon to decoctions for colds and bronchitis for its expectorating qualities and gently warming circulatory stimulation. In the kitchen, cinnamon comes in handy not only as a dash of flavor for a sweet or savory dish but also in simple first aid as a dusting to control bleeding from minor cuts. Cinnamon has long been appreciated for its antimicrobial virtues, making it effective topically, whether on the skin or on kitchen surfaces.

Perhaps it is nature’s gift to people with a sweet tooth that such a ubiquitous and delicious dessert addition can also support the body’s response to sugar. Recent scientific studies show promising results regarding cinnamon’s ability to reduce blood sugar spikes when taken with meals. Cinnamon may assist the cells’ ability to take in glucose from the bloodstream. Taken over time, cinnamon may also help balance triglycerides and cholesterol. Daily regular consumption is more appropriate with the Ceylon variety, as it is gentler on the liver.

Whether on toast or in tea blends, the taste of cinnamon is beloved. Herbalists like to add a touch to tincture formulas for its soft warmth and sweet flavor. Cinnamon is also revered as a spicy fragrance in cleaning agents and perfumery. Real estate agents know that the nurturing aroma of cinnamon in the kitchen can charm a prospective buyer. The savvy lover with flirtatious intentions knows that enticing with a little cinnamon aphrodisiac can catalyze romance.

Tightly wound “true” cinnamon bark

Nutty Cinnamon Bites

These bite-size treats are an easy way to get in a dose of cinnamon while also getting beneficial proteins and healthy fats. Simply blend together equal parts of a favorite store-ground nut butter and Ceylon cinnamon powder (one cup of nut butter to one cup of cinnamon, for example). Use a standing mixer or your hands to cream together thoroughly. Scoop out one teaspoon at a time and roll by hand into marble-size bites. Refrigerate in an airtight bowl and eat one with each meal. These cinnamon-forward bites help provide the nutrition important to maintain a healthy blood sugar and cholesterol profile.

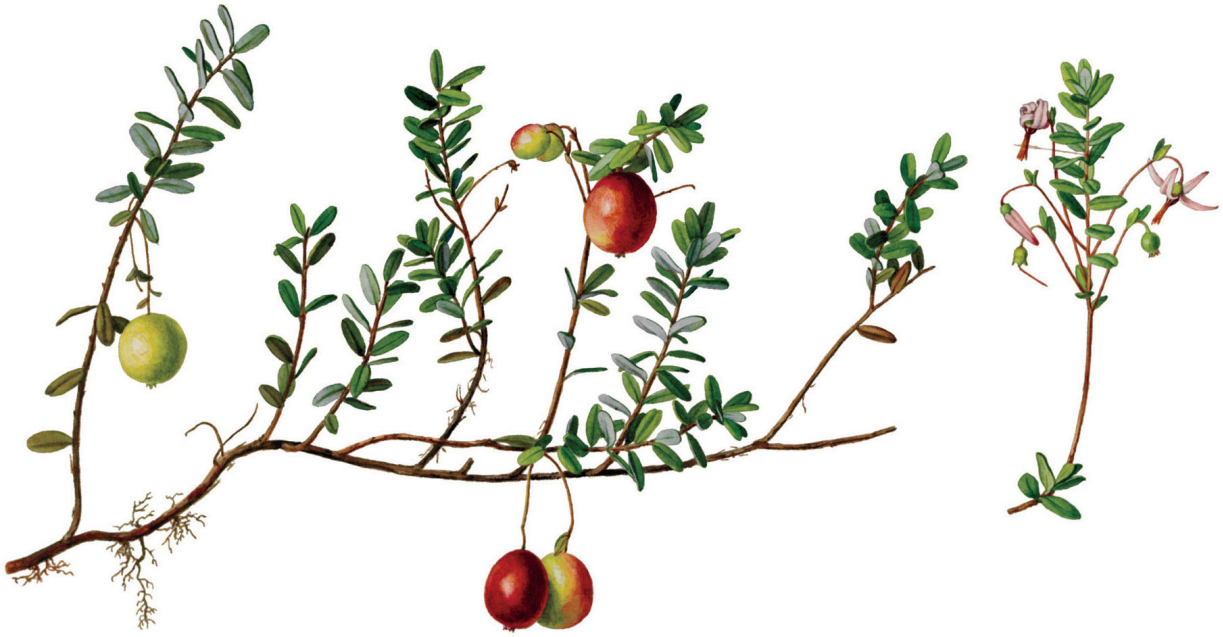
16

{ Cranberry }

Genus and Species: Vaccinium macrocarpon
Family: Ericaceae

A tart fruit that benefits the skin and within

The cranberry plant's name derives from its shape: The curvature of its daintily pointed stem bowing downward into reflexed chiffon petals is evocative of the graceful, slender neck and long beak of a crane. And its feathered namesake loves to eat this berry. A native American perennial, cranberry has long been a treasured edible across the northern Appalachian regions, central United States, and north through Canada. Many traditionally welcome the berry with gratitude into the kitchen around the fall and winter holidays. Many of the ethnobotanical uses of cranberry originate in Native American wisdom, a wellspring of plant knowledge from which much modern understanding has evolved.



THERAPEUTIC USES

Cranberry sauce or juice makes a meal more festive, but cranberry is also incredibly versatile as a medicine when raw, cooked, dried, or powdered. This sour fruit contains profoundly nourishing properties that pack a nutrient-dense punch. Like its close relative the blueberry, the cranberry is chock-full of colorful antioxidant anthocyanins. Currently, cranberry is most popular for its use in bladder health, and the juice remains a popular remedy for urinary tract infections. Like blueberries, cranberries are known to have anti-adhesive qualities, meaning that they alter bacteria so as to prevent them from penetrating the bladder membrane. This quality makes the cranberry useful in the treatment and prevention of bacterial conditions, including the buildup of oral plaque and ulcers associated with bacterial infections such as *H. pylori.* Furthering bacterial balance, cranberry is a healthy prebiotic known to feed the beneficial bacteria in the digestive and urinary tracts. Blending fresh, frozen, or dried fruit in smoothies with a little yogurt is a healthy way to kick-start probiotic health.

Cranberry can also be very useful in a topical application. A dusting of cranberry powder is helpful for oozing, weeping infections. A frozen berry poultice or a topical wash of tissue-tightening cranberry juice may speed along the healing of painful sores. And a smear of cranberry-infused honey adds a protective, antibacterial element during wound care.

There is evidence that cranberry inhibits the dispersion of viruses. Herbalists may suggest drinking pure cranberry juice as a way of preventing both bacterial and viral adhesion and also shortening the duration of infection. As the astringent fruit is so high in vitamin C, it is the perfect go-to remedy at the first sign of a seasonal sore throat or emerging viral cold sore. One caveat with cranberry: Don’t supersede all of its wondrous attributes by ingesting the high amounts of sugar with which the juice is often blended. It is preferable to consume raw or dried unsweetened cranberries or to drink 100 percent juice, which can be diluted with a little still or sparkling water. Some people prefer encapsulated cranberry to avoid the intensity of its pucker-producing flavor, while others savor this strong medicine’s tart potency and saliva-inducing action.

The tiny, graceful cranberry flower

Siberian Swamp Cranberry

Vaccinium oxycoccos is a small cranberry that thrives in the harsh winter climates of the high boreal latitudes of the Northern Hemisphere, including the northernmost areas of Europe, North America, and Asia. These bog cranberries are an important food source in Russia, where they are treasured for their health-giving attributes. A centuries-old Russian fruit drink called *mors* is made by simmering cranberries in sweetened water. Variations on the beverage invigorate it with assorted spices and twists of other fruity flavors. Served hot or cold, this vibrant burgundy cranberry water is traditionally considered a potent vitality tonic.

17

{ Flax }

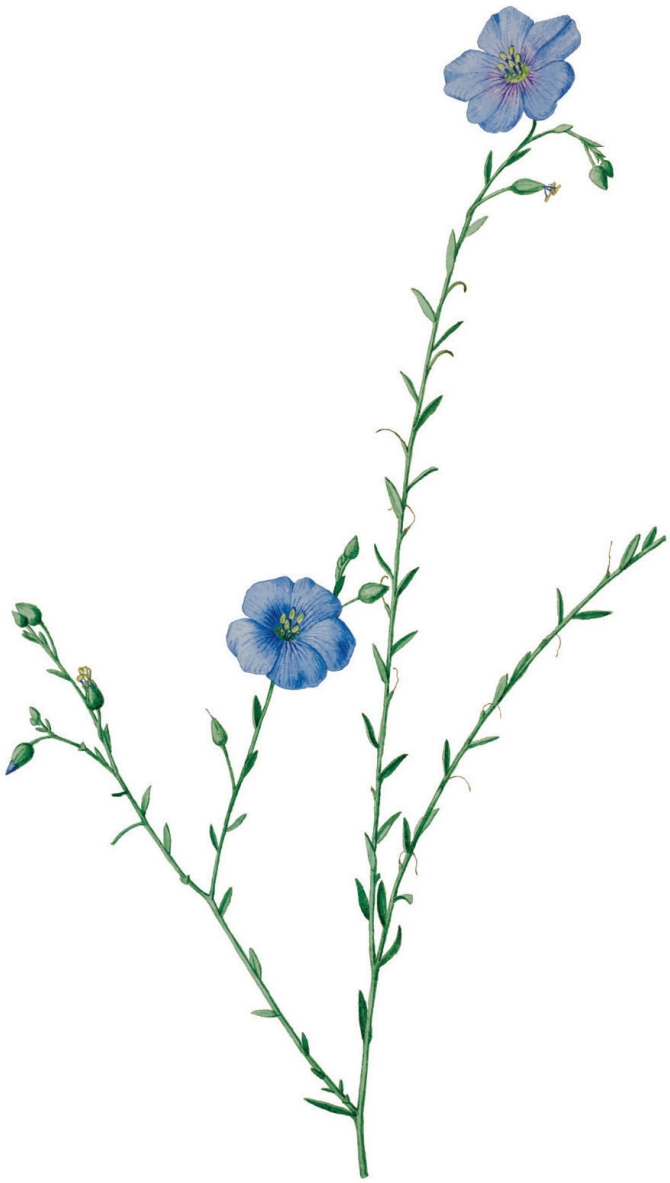
Genus and Species: Linum usitatissimum
Family: Linaceae

A tiny seed with a big impact of fiber and nutrition

Tellingly, the species name of flax means “most useful.” Thought to have originated in the Mediterranean, flax has been cultivated since the beginning of civilization, with evidence pointing to the Fertile Crescent of the Middle East as the ancient region where this indispensable plant was first domesticated. Its fibers are important in the weaving of linen, its straw is used for livestock fodder, its linseed oil protects leather and wood, and its abundant seed is edible. Adaptable flax has also been valued since antiquity for a variety of medicinal purposes, from digestive support to remedying nutrient deficiency.

Grassy flax stems, growing one to three feet (0.3 to 0.9 m) tall, are slender, erect, and dotted with narrow leaves. Every one of these herbaceous plants produces dozens of

five-petaled flowers, each lasting a single day. At their peak, the blooms gaze up toward the sky, making a field of flax waving in the breeze reminiscent of a periwinkle-blue sea. Later in this annual’s growth cycle, the greens and blues fade as papery globe-shaped capsules, each filled with 10 glossy seeds, replace the flowers.



THERAPEUTIC USES

The tiny grain-flavored seeds of flax come in myriad golds and shiny browns and are packed full of satiating nutrition. They can make protein-rich meals by themselves, cooked into a hearty porridge for sustenance and during convalescence, or acting as a healthful addition to smoothies, cereals, and baked goods. Cold-pressed flaxseed oil, mildly nutty and slightly bitter in flavor, can be drizzled over cold dishes and salads for an anti-inflammatory boost of omega-3s. High in alpha-linolenic acid, it should be kept in the fridge to preserve these delicate fatty acids.

Aside from being nutritive, flaxseed is incredibly mucilaginous and hence plays a useful role in first aid. A spoonful of ground flaxseed in water will swell into a slippery gruel that can be used topically as a drawing poultice or taken internally to cool inflammation and soothe the troubled gut. The viscous water of a flax infusion can comfort irritated eyes. The soothing tea can cool a hot sore throat or be consumed cold as a lubricating tonic for dry, constipated bowels.

Just one tablespoon of flaxseed contains a hefty amount of both soluble and insoluble fiber, which can be used as a bulking laxative to benefit the bowels. It also slows down the absorption of sugar into the bloodstream, helping to maintain healthy blood sugar levels. Soluble fibers are known to bind to excess bile salts and cholesterol, gently escorting them from the body, making flax part of a heart-healthy diet and beneficial in the maintenance of a healthy gallbladder.

Flaxseeds are a rich food source of healthy lignans: phytonutrients associated with prolonged survival in cancer patients. Research shows promising effects in the use of these plant-based phytoestrogens for balancing the hormones. Many find that eating ground flaxseed can be helpful for easing the symptoms surrounding menopause. Studies also point to flaxseed as a potential food and

medicine for nourishing kidney function, especially benefiting those with lupus.

A flax flower blooms amid seed-bearing capsules.

When in Peru: *Emoliente!*

Nearly every street corner in Peru has an *emoliente* stand where Peruvians line up for their feel-good flax fix. The classic emoliente recipe is composed of equal parts flax and roasted barley, steeped in steamy water, with an added assortment of various nourishing herbs, including horsetail, alfalfa, chamomile, or plantain. The final beverage is sweetened and topped off with a squeeze of lime juice. As its name implies, the soothing emoliente is celebrated as a palliative panacea for many common ailments. The viscous infusion goes down easily and is packed with the nutritious comfort and wholesome goodness needed to start or unwind from the day.

{ Garlic }

Genus and Species: Allium sativum
Family: Amaryllidaceae

An aromatic bulb with broad-spectrum benefits

Garlic is arguably the most commonly used medicinal herb in the world. Widely cultivated in a range of climates, the root of this allium is enclosed in a papery shell, which peels off to reveal creamy white crescents embodying a huge array of culinary and therapeutic properties. Pungent and sharp when freshly crushed, sweet and mellow when cooked, garlic has been an invaluable food and medicine in kitchens throughout history.

THERAPEUTIC USES

Herbalists know garlic for its broad-spectrum antimicrobial, antiparasitic, and antifungal properties. Its aroma is enticing to some and repellent to others, and it’s this odoriferous intensity that signifies garlic’s medicinal potency. An intact bulb of garlic has almost no scent, but once crushed, a cellular transformation starts up that brings out that piquant fragrance. Once garlic’s cell walls are broken down, an enzyme called alliinase comes out to play. When it bumps into the amino acid alliin, a neutral bystander inside the cell, it prompts a chemical reaction that converts odor-free alliin

into the aromatic and highly medicinal compound allicin. Because heat renders alliinase inactive, herbalists often advise chopping fresh garlic and letting it sit a few minutes to undergo the conversion before throwing it in the pan.

When garlic is eaten, these beneficial volatile compounds excrete through the lungs, not only creating garlic breath but also fumigating and thinning mucus; traveling through the bowels, they knock out parasites; and emerging through the skin, they elicit a diaphoretic, or cooling, sweat. Plenty of doctors tout garlic's benefits to the cardiovascular system, which include preventing atherosclerotic plaque buildup, lowering blood pressure, reducing cholesterol, and preventing blood clotting. Science is also finding that garlic has the potential to clear out carcinogens via the liver.

As a kitchen remedy, garlic's uses range from everyday sniffle prevention to a secret weapon against stubborn infections. Herbalists consider garlic to be on the front line of defense against common colds and infections. A garlic intensive—that is, frequent consumption of garlic throughout the day, so much and so frequently that one eventually exudes fumes—can help a person regain health and perhaps even prevent new infections from taking hold. A classic herbal remedy for assisting in the recovery of ear infections consists of garlic- and mullein-infused oil warmed and gently dropped into the ear cavity. Garlic is a central ingredient in fire cider (see here), dear to the heart of the herbalist. Other creative kitchen recipes include garlic lemonade, garlic-infused honey, or simply adding garlic to toast or soup. Garlic powder, rich in allicin, can be added to broth or tomato juice.

Garlic also has topical applications: The active constituents of garlic can pass through the skin and into the bloodstream. In the old days, garlic juice was added to poultices to treat topical infections. Some herbalists might suggest a poultice of raw garlic wrapped around the soles of the feet to absorb its compounds. Caution should be

exercised, however, to be sure the garlic does not irritate the skin. Garlic- infused olive oil, gentler than raw garlic and very antifungal, can be swabbed on ringworm infections and athlete’s foot—and also, of course, be used in heart-healthy cooking.

Gathering garlic, as represented in the Tacuinum Sanitatis, a medieval handbook on health based on an 11th-century Arab treatise

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Fermentation Transformation: Black Garlic

Prized in fine cuisines for its smooth sweetness and moist, pasty consistency, black garlic is made by a natural fermentation process that elicits an enzymatic transformation known as a Maillard reaction. This darkening process occurs when proteins or amino acids meet with carbohydrates and a chemical reaction is catalyzed. Fresh whole garlic bulbs are aged in a warm, humid environment for several weeks to produce this mysterious anomaly. Modern fermenters may use rice cookers or

dehydrators set on very low temperatures to elicit the conversion from white garlic to black. As a bonus, black garlic is said to be even more antioxidant than its pale counterpart.

19

{ Ginger }

Genus and Species: Zingiber officinale
Family: Zingiberaceae

A warming root that circulates health to every cell in the body

Ginger is a favorite among kitchen herbalists, not only for the fragrant spiciness it adds to recipes but also for the healing warmth it embodies as a medicine. The edible ginger root commonly found in grocery stores is actually a fleshy rhizome, an underground, horizontally creeping root from which reed-like shoots emerge each year. These tapering sprouts unfurl into leafy green blades while separate stalks spring forth and produce magnificent cone-shaped inflorescences bearing pink, yellow, or red-shaded blooms. Likely originating in Southeast Asia, ginger has been cultivated since antiquity and now has no known wild habitat. Botanically, it belongs to the Zingiberaceae family, which includes other spices such as cardamom and turmeric.

THERAPEUTIC USES

The root (or, technically, rhizome) of ginger is used in herbal medicine primarily as a circulatory stimulant and general anti-inflammatory. Like most aromatic herbs, ginger is a carminative and digestive aid and can be drunk as an infusion to ease an upset stomach or curb gassiness. A shot of fresh ginger juice can help minimize the uncomfortable gut spasms common in ulcerative colitis, irritable bowel conditions, and gallbladder ailments. Ginger ale or bits of crystallized ginger candy are favorites to calm motion sickness in children, and capsules of dried ginger make a handy travel companion for the prevention of sea or altitude discomfort. As an antiemetic, ginger is renowned for its ability to prevent nausea caused by conditions ranging from pregnancy to chemotherapy. It may also be helpful in

alleviating painful menstruation, especially in combination with roots like wild yam or black cohosh.

Like all spices, ginger is a potent antioxidant, and much of the research on it centers around its reliable anti-inflammatory and possible cancer-preventive activity. Many who regularly consume ginger have found relief from chronic inflammation and arthritis. Energetically, ginger is considered to stimulate blood flow, warming up afflicted joints and dispersing heat, and a 2014 study on endurance athletes reported in the *Central-European Journal of Immunology* suggested ginger can reduce and calm pro-inflammatory cytokines. Both science and traditional use suggest that ginger contributes to heart health, balances cholesterol and blood lipids, and helps to prevent diabetes. Ginger has long been a tonic to enhance brain health, mitigate depression, and boost cognition and memory in Arabian folklore. Modern research is uncovering ginger's role in the prevention of neurodegenerative conditions.

Herbalists consider fresh ginger a choice remedy for colds, fevers, and allergies. It appears to contain antiviral qualities and its dispersing, moving nature can help break up sinus congestion. Fresh ginger, effective at inducing sweat, is a primary ingredient in traditional fire cider, often consumed at the first sign of a seasonal immune threat (see here). Ginger's warming invigoration, in combination with energetically cooling herbs, lends balance to the body. A ginger paste made with honey and ginger powder is a zesty way to deliver the herb's signature aromatic warmth to a convenient cup of tea. Ginger is also a beloved potentiator of almost any herbal formula or tea blend, acting as a driver for the other herbs. Synergistic spices like ginger, which rev up the flow of blood, circulate other herbs to the organs for which they have targeted affinities.

Ground ginger in a spoon; fresh-cut ginger in the background

Make a Ginger Electuary

An electuary is a tasty kitchen remedy made by combining powdered herbs with honey to make a paste. The honey acts as an effective preservative and adds to the medicinal spectrum of the formula, creating a tasty treat. Making a ginger electuary is as easy as blending ginger powder into honey and working it into a paste. It can be made as thick or thin as one wishes, and a very stout electuary can also be rolled with the palms of the hands into lozenge-like balls. A spoonful of ginger electuary stirred into hot water works well as a quick warming stimulant.

{ Oregano }

Genus and Species: Origanum vulgare
Family: Lamiaceae

A flavor-forward garden herb to dry and warm

The word “oregano” translates from the Greek to the phrase “joy of the mountain,” a nod to its charming reputation in its locale of origin. An exquisite mint bearing clusters of pink and purple blossoms, oregano grows wild off the Mediterranean coast and is cultivated commonly in gardens around the world. Oregano adds a fresh burst of zesty flavor to recipes of many different cultures, from Italy to China to Mexico. Like most aromatic and piquant herbs, oregano is high in antioxidant activity. It has as many medicinal uses as culinary.

Hippocrates, the ancient Greek physician, believed that this sweet, pungent herb came directly from Aphrodite, the goddess of beauty. If so, Aphrodite—presiding over love, passion, and allure—was onto something. Oregano helps maintain a healthy, attractive glow by neutralizing free radical damage, underscoring its reputation as an herbal fountain of youth.

Oregano is one of those herbs that most people have in their spice cabinet, in a terra-cotta pot on the porch, or on a

sunny windowsill, selected for its beauty and flavor but now valued for its medicinal properties as well.

THERAPEUTIC USES

Energetically, oregano is a drying, warming aromatic. It’s incredibly versatile and can be used as a tea to treat many ailments, including urinary tract infections and painful menstruation. Its warmth brings blood flow to the surface, which may expedite healing and increase circulation.

Oregano has long been used topically as well to address skin outbreaks in both humans and farm animals. Much of oregano’s medicinal action is due to its potent volatile oils, which give it antimicrobial qualities. A moist poultice of oregano might be used to prevent infections on wounded or burnt skin. Oregano has also been used topically for a range of fungal issues: as a warm soak of oregano infusion on athlete’s foot, an oregano sponge bath for ringworm, or a sitz bath in oregano for sensitive areas afflicted by candida, for example. A dried powder of oregano makes an effective dusting for weeping, fungal, or ulcerous skin conditions. Oregano compresses and baths have also been used to soothe achy joints.

Within the aromatic fingerprint of oregano are two volatile compounds associated with antiviral properties, carvacrol and thymol. A convenient gargle or a steam inhalation of this herb can tend to a sore throat, a stuffy nose, or congested airways. Like clove, oregano also contains eugenol, and the two herbs share a traditional history of being a chew for toothaches.

As with most strongly scented herbs, oregano is an effective carminative, which alleviates gassiness. Eaten as a garnish, it can help digestion and nutrient assimilation after a big meal. Kitchen creativity abounds with oregano. It can add a mouthwatering twist to infused vinegars, salad

dressings, marinades, and pesto. An oregano-infused honey, made by soaking fresh or dried leaves in honey for one week to a month, is a sweet, spicy way to calm an annoying cough, speed the healing of a festering wound, or enjoy as a delicious condiment.

Argentinian chimichurri

Argentinian Chimichurri

Beloved in its homeland of Argentina, chimichurri is a vibrant green sauce that adds a burst of flavor to savory dishes. Oregano and parsley give chimichurri its deep color and flavor. While every family has its own secret chimichurri recipe, the basics of creating this condiment are easy. First, very finely chopped fresh parsley and oregano are steeped in olive oil. To this mixture, families add various ingredients such as onion, tomato, garlic, and chilis to make their own distinct variation on a theme. Lemon juice, vinegar, and seasonings are added to round out the zest. The resulting rich slurry can be used in marinades and dressings or to enhance the flavor profile of almost any dish.

21

{ Prickly Pear Cactus }

Genus and Species: Opuntia spp.
Family: Cactaceae

A spiny cactus containing an oasis of medicinal mucilage

In Mexico, nopales are about as common a dinnertime staple as green beans are in the United States. But the variety of preparations is endless: fresh picked, grilled, canned, bottled, steamed, pickled, stir-fried, juiced, or even jellied. *Nopal* is Spanish for prickly pear cactus. Most of these species are native to Mexico and other arid southwestern environments, but surpisingly, one species—*Opuntia humifusa,* eastern prickly pear cactus—enjoys a native range in the colder regions of the eastern United States and Canada. A no-fuss gardener's delight, it spreads easily year after year. Simply tossing a few fallen pads onto a bare patch of earth is often enough to get the rooting process started. The yellow, pink, orange, or golden-hued blooms are exquisite and explosive. The oval fruit, known as

prickly pear in English and *tuna* in Spanish, is a plump and juicy treat, striking in its tropical color and intense in flavor.

There are more than a hundred species of nopales, and most are edible—with an intimidating caveat. It takes a valiant effort to harvest the tender cactus flesh from its cover of infamous spines, clustered in varying, species-dependent shapes and textures. Younger pads are a lighter green shade and have softer spines and a more succulent interior. Wildcrafters handle each pad with care, trimming around the prickly edges and digging out the spiny clusters with a knife. In some cases, the spines are torched off on the grill or with a flame. The leathery outer layer of the “pears”

is covered in a fine array of barely visible fiberglass-like prickles called glochids that can lodge deep into the skin. It helps to have a set of long tongs paired with a strategy to cleanse the sneaky fuzz by flame or sand scrub.

Beyond this heavy-duty peel, the challenge persists. Once the inner fruit is revealed, one must navigate around dozens of pebble-shaped seeds to savor the luscious pulp. If the process seems intimidating, never fear: Your local Mexican grocery store probably stocks jars of processed nopal, smooth and ready to enjoy.

THERAPEUTIC USES

Persistent efforts to uncover the edible inner nopal are well rewarded. Packed with luscious nutrition, the cactus pad can also be profoundly medicinal. The delicate flesh is filled with a mucilage similar to aloe. In traditional folk herbalism, hot or inflamed conditions in need of cactus's cooling and moistening energetics receive rapid comfort from its goo. An open pad can be applied as a poultice to the skin for burns and headaches, and like many mucilaginous plants, nopales' drawing effect can gently coax out splinters, stingers, and boils. An elixir of the pads, flowers, or fruits—all slippery to some degree—can nourish and mend mucosal membranes. Herbalists consider the viscous remedy specific for hot, dry conditions like ulcers, cystitis, bronchitis, irritable bowel syndrome, or a sore throat.

Those who eat nopales relish these unusual fruits for their unique ability to prevent diabetes and help manage cholesterol. The slimy inner leaf, with its high levels of fiber and pectin, delays the absorption of carbohydrates and softens a post-meal glucose spike. Cactus is a rich source of magnesium and manganese, both known to assist in the regulation of blood sugar. As an extra nutritive bonus, cactus can prove to be a good source of oligosaccharides such as

inulin. These feed beneficial colonies of bacteria in the digestive tract that can improve digestion and elimination while stimulating immune function.

Prepare prickly pear pads for eating by removing their spines with a paring knife.

The Oasis Meets the Desert: *Salsa de Nopalitos*

One of the most common ways to enjoy cactus in Mexico is as a side dish of salsa made from cactus pads, freshly picked and cleaned, their spines removed and edges trimmed. Simply slice the cactus pads into pinkie finger–size strips and boil them in a pot of salted water for 10 minutes. While they cook, chop up some favorite salsa ingredients: onions, cilantro, jalapeños, and tomatoes. Then rinse the boiled cactus under cool water for a few minutes to remove some of the mucilage. Stir the strips into the other salsa ingredients and add a liberal amount of fresh lime juice. Season to taste and enjoy with chips or tortillas.

22

{ Shiitake }

Genus and Species: Lentinula edodes
Family: Omphalotaceae

A flavorful fungus of vitality and nourishment

The shiitake mushroom is an important and nourishing kitchen ingredient often recommended by herbalists and doctors alike. Shiitake is the fruiting body of a fungus native to the hardwood forests of Asia, but now herbalists and fungi lovers enjoy growing shiitake on logs in their backyard, thus making these healthful mushrooms readily available worldwide.

Shiitake is one of the most commonly cultivated mushrooms on the planet, second only to button mushrooms. Its nut-brown cap and stem can be found at grocery stores fresh, dried, or powdered. To many, shiitake has a fairly recognizable form. But mushrooms are notoriously difficult to identify, and simple mistakes can be fatal. It is important for people foraging or otherwise

sourcing wild medicinal mushrooms to rely on expert guidance and trusted cultivators.

THERAPEUTIC USES

A prized food and medicine within Asian culture because of its mild earthy flavor and tender meaty flesh, shiitake mushrooms make a favorable addition to soups and rice pots. Traditionally, the rich decoction of shiitake is most esteemed in healing. High in polysaccharides, it requires a long simmer to unravel and make those ingredients bioavailable. Subjecting shiitake to heat for longer periods of time, whether boiling or pressure cooking, does increase the beta-glucans and antioxidant content and enhance the medicinal qualities. An herbalist might recommend a liquid brew made by boiling shiitake for 40 minutes and saving the broth to be sipped or dosed appropriately. Or, for everyday use, the tender mushrooms can be freely added to sautés, stir-fries, and countless other kitchen recipes. The decocted broth can be frozen in ice cube trays and taken daily, one cube at a time, melted into soups, coffee, or tea. Better yet, add shiitake to a weekly batch of soup or broth with other polysaccharide-rich herbs such as astragalus. Sipping this

broth can be a nourishing way to support the immune system.

Medicinal mushrooms are a rich source of the compounds called glucans, which are composed of long glucose strands, or polysaccharides. Shiitake abounds in biologically active glucans—including beta-glucan—considered immunomodulators that balance the body's natural defenses and may either boost a suppressed immune system or calm an overactive immune system, depending on an individual's needs. Herbalists consider shiitake-based remedies a tonic for those with frail immunity who are chronically challenged by recurring colds, respiratory infections, candida, or viruses. Shiitake is notably antiviral and beneficial for people struggling with HIV, HPV, herpes, or viral hepatitis. A shiitake decoction can be made into a syrup to soothe inflamed bronchioles. Shiitake mushrooms can also prove useful for regulating urinary incontinence.

A specific beta-glucan, lentinan, is hailed for its use in the prevention and treatment of cancer. Shiitake extracts, rich in lentinan, are used in China and Japan in therapies accompanying oncology treatment, especially against lung, gastric, and colorectal cancers. In Traditional Chinese Medicine, shiitake mushrooms are known to boost longevity and regulate heart health. Shiitake is often recommended in the diet to help lower cholesterol and triglycerides. The effects are maximized over time, providing optimal support when incorporated into the diet over several months.

Dried shiitake mushrooms

Shiitake Immune Cups

It is easy to make individual portions of shiitake broth for someone in need of deep immune support. Simply add a handful of fresh or dried shiitake mushrooms to three quarts of simmering water. Feel free to add vegetable scraps, including garlic, celery, and onion, for extra nourishment and flavor. Simmer this until the liquid is reduced by half, then divide broth equally into half-pint jars for individual servings. Add a teaspoon of miso paste to each jar, then shake and season to taste. Store the jars in the fridge for up to one week, pulling one out each day to warm and sip. (Do not reboil, as the miso is quite delicate.)

HERBAL HERITAGE

The Tradition of Fire Cider

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Many aspects of modern herbalism are steeped in a rich history of self-sufficiency, necessity, and accessibility. Several renowned formulas used today are the very product of such traditions, passed down through consecutive generations with new knowledge and information added at each step. One such traditional formula, well known and widely adapted, is the legendary fire cider: a tonic of apple cider vinegar, honey, garlic, chili pepper, and various combinations of warming herbs and spices. Its pungent and sweetly acidic taste carries with it flavors and a folklore that promise to support general health and well-being.

Fire cider is traditionally made by infusing equal parts of unfiltered apple cider vinegar and honey with grated horseradish and ginger, chopped onions and garlic, and cayenne pepper for several weeks, and then straining to create what is known as an oxymel. Oxymel, derived from the Greek word *oxymeli,* translates roughly to “acid and honey.” Oxymels were traditionally used to mask the sometimes unpleasant and pungent flavors of various medicinal herbs. These vinegar-honey mixtures have been shared throughout the centuries, and their traits continue to be beneficial today.

The legacy of vinegar dates back to ancient civilization. Valued for its culinary versatility and medicinal properties, vinegar is a traditional staple in tonics for general wellness

and overall health. The first vinegars were made by fermenting dates, figs, and beer. Many modern versions are based on fermented apple juice, resulting in the beloved apple cider vinegar. Appreciated for its flavor and minimal processing, apple cider vinegar is the modern herbalist’s go-to for use in medicinal remedies.

Anecdotally, vinegars have been used to aid in digestion, alleviate cough, and relieve chest congestion associated with seasonal allergies. Many have found innumerable benefits from a daily dose of apple cider vinegar. To increase its utility and effectiveness, some herbalists soak, or macerate, medicinal herbs and spices in apple cider vinegar for several weeks, creating an exceptional healing extract that can be used on its own or blended with other ingredients. A perfect example of such a concoction is fire cider.

Tapping the vinegar barrel—a 14th-century French illustration of an 11th-century Islamic treatise on health

HONEY AS REMEDY

Like vinegar, honey is a time-honored treasure of an ingredient. In a fire cider, honey lends a flavor boost of warmth and sweetness, but it also gives the remedy a stickiness that enhances its ability to adhere to sensitive tissues. Medicinally, honey has long been valued by healers for its antimicrobial and tissue-mending properties. As both a home remedy and a modern medicine, honey is applied topically to accelerate healing of wounds and burns and taken internally to tend to the fragile mucosa of conditions like peptic ulcers and sore throats. Herbalists often prefer sourcing local honey, encouraging small daily doses to build the immune system in the face of issues such as seasonal hay fever. Clinical observers note honey's beneficial effects on both markers of inflammation and immunity.

Preparing fire cider with the freshest of ingredients. Photo courtesy Herbal Academy

FIRE CIDER IN MODERN HERBALISM

By its very nature, the original formulation of traditional fire cider lends itself to versatile changes. For instance, should a fire cider be desired for immune support, echinacea, turmeric, or elderberry can easily be added to the initial vinegar infusion. Just as easily, cinnamon, honeysuckle flowers, or oregano can be added to a fire cider for promotion of lung and sinus health. Highly warming herbs such as clove, cardamom, or black pepper can be introduced for a phenomenal cardiovascular tonic. The possibilities are endless.

While many well-known herbal remedies have persisted in many incarnations, fire cider in particular has been a vital part of modern herbalism since its inception. Unbound to any specific school of herbal thought or practice, fire cider symbolizes how herbal wisdom is made to be shared and built upon by the communities who use it, often incorporating the beloved herbs of their lineage. For example, American herbalist Lucretia VanDyke is fond of hibiscus, an herb of her African ancestry, in her colorful fire cider recipes. And Mexican American herbalists like Charles Garcia have been known to impart a soothing viscosity by adding prickly pear fruits to their vibrant concoctions.

Rosemary Gladstar, revered by many as a grandmother of modern American herbalism, has been spreading the enthusiasm of fire cider throughout her career. “Fire cider is an entry-level remedy and a wide-open gateway into home herbalism. Many people who make fire cider realize how simple and easy it is to make kitchen medicine. And one thing leads to another … soon they are picking elderberries and making delicious elderberry syrup, one of the best antiflu medicines available. Or they are chopping up fresh roots of echinacea to make their own immune tonic. It’s so fun to see medicine come back into the kitchen and people rediscovering their ancestral herbal roots,” she writes in her

book *Fire Cider!*. Gladstar honors herbal remedies that have been passed down through generations and is quick to point out that herbal healing is born of ancient plant wisdom. Rather than belonging to any one of us, this wisdom belongs to all people to use and share.

Now many commercially available blends of fire cider are sold at local markets and in the wellness aisle of the grocery store. While some may be handmade in small batches by local herbalists, many are now mass-manufactured and often lacking full disclosure of the ingredients used. As traditional herbalism is rooted in accessibility to all, it is a comfort to know that this powerful and well-respected medicinal tonic need not be bought commercially. Anyone with a well-stocked kitchen pantry can make it simply by grabbing some apple cider vinegar, honey, and herbs and mixing up a unique fire cider to be enjoyed in good health alone or shared among friends. Adaptable and dynamic, fire cider is a vital embodiment of herbal tradition.

Golden honey, medicinal in itself and key to making fire cider

Herbs Valued in the
Fire Cider Tradition

. . . . . .

CAYENNE
Capsicum annuum

CINNAMON
Cinnamomum spp.

GARLIC
Allium sativum

GINGER
Zingiber officinale

ROSEMARY
Salvia rosmarinus

. . . . . .

3. Apothecary Herbalism

BONESET
CLEAVERS
GOLDENROD
JEWELWEED
JOE PYE WEED
RED CLOVER
ST. JOHN'S WORT
SUMAC
VIOLET
WILD BLACK CHERRY
YARROW

Floral bundles hang to dry.

Common Herbal Preparations

An herbal apothecary can range from a simple pantry lined with bottles and jars filled with folk remedies to a storefront with refined herbal supplements manufactured with best practices in mind. In either case, herbalists must have a basic understanding of the properties of herbs and how to extract them into the

preparations best suited for each particular individual and situation. These simple preparations are likely to be found in any herbal apothecary and, in many cases, are easy to make at home as well.

HERBAL TEAS, TISANES, INFUSIONS, AND DECOCTIONS

Teas, tisanes, infusions, and decoctions are all water-based herbal preparations. In this book, the term “tea” is used broadly in reference to herbal infusions or tisanes (pronounced tee-ZAHNS), a French term for an herbal tea.

Tisanes made of leaves, flowers, or aromatic plant parts tend to be gently infused in steamy water and covered with a lid to create an infusion, while a tisane made from sturdier plant parts like roots, barks, and seeds should be simmered for a few minutes, creating a decoction.

An herbal tea made from only one plant is considered a “simple,” while one made from many herbs would be a “blend.” Upon preparation, an herbal tea should be strained and sipped while warm, cooled over ice, or stored in the refrigerator for up to three days. See *Nourishing Red Clover Infusion, p. 99; Passionflower Household Tisane, p. 271;* and *Tea* (Camellia sinensis), *p. 274.*

HERBAL TINCTURES

Herbal tinctures are concentrated liquid extracts, typically made using a mixture of water and alcohol. Their advantages include easy dispensing and a long shelf life. Alcohol is a selective solvent that pulls out different constituents than water alone. For example, alcohol can extract resins from herbs, but water cannot. For folk tinctures, many herbalists use undiluted vodka, brandy, or gin, which tend to be 80 proof (or 40 percent alcohol by

volume). Some use stronger grain alcohol, 95 percent alcohol, diluted for various ranges of solvency. See *Tincture Making 101: Joe Pye Weed, p. 97.*

The careful practice of preparing herbal medicinals

HERBAL GLYCERITES

An herbal glycerite is a preparation made with a base of glycerin and water. Sweet and syrupy and sometimes made without alcohol, glycerites are a popular children's remedy. Glycerin, a natural sugar alcohol compound, is metabolized differently from sugar and therefore often used for sweetness and moisture enhancement in low-carbohydrate foods—a popular choice for those who are watching their sugar intake. Glycerin's smooth solvency also makes it an effective carrier for sweet, aromatic, astringent, and colorful herbs such as sumac berry. It can also be used to extract bitter and astringent herbs, and disguise flavors that might deter kids (and adults) from ingesting them. Most herbalists prefer using a colorless vegetable-based glycerin derived from coconut oil. See *Make a Sumac Berry Glycerite, p. 103.*

Gathering medicinal flowers, as represented in Tacuinum Sanitatis, a medieval handbook of medicine

Wonderfully effective and palatable, herbal syrups are thick and sticky. The base of an herbal syrup is generally a strong boiled brew of herbs thickened and sweetened with sugar, honey, maple syrup, or molasses, which have preservative properties when blended in the right ratios. They tend to coat and protect irritated membranes better than teas and are commonly used to ease sore throats and coughs and to soothe and coat sensitive tummies. See *Boneset Syrup for Winter Ailments, p. 89; Wild Cherry Bark and Maple Cough Syrup, p. 107;* and *An Old-Time Iron Tonic, p. 209.*

HERBAL SYRUPS

HERB-INFUSED VINEGARS

Herbal vinegars are a nourishing way to enjoy many edible wild plants and culinary herbs. Herbalists use their favorite nutrient-dense vinegars, such as apple cider, champagne, or rice wine, as bases for many different plant-based recipes and remedies. Vinegar pulls the nutritive minerals and colorful medicinal compounds out of plants and makes these phytochemicals accessible to the body. Because of this, herb-infused vinegars made with nutrient-dense cleavers or goldenrod are touted as bone- building and vein-healing remedies, respectively. Infused vinegars made with colorful herbs like violet blossoms make brilliant remedies that can be sipped by the spoonful with a meal or used in marinades, salad dressings, soups, and many other recipes. Aromatic herbs, such as minty plants, infused in vinegar are not only delicious but also make effective household cleaners. See *Violet Blossom Herbal Vinegar, p. 105.*

St. John’s wort leaves and flowers

HERBAL SUCCI

An herbal succus is essentially plant juice, prepared by pressing the liquid from freshly harvested herbs. Like a shot of wheatgrass, an herbal succus of cleavers or red clover can be an invigorating and nourishing way of consuming the healing vitality of herbs. Ideally, herbal succi should be drunk immediately upon juicing, although herbalists often preserve succi by adding a small amount of grain alcohol or simply by freezing in ice cube trays. Herbal succi can also be used externally as cooling compresses for various skin inflammations, including poison ivy, sunburn, and bug bites. See *Spring's Green Juice: Cleavers Succus, p. 91.*

FLOWER ESSENCES

A flower essence is an herbal preparation in which the vibrational energy of a blossom is infused and imprinted into water. Flower essences work on an energetic level to create subtle shifts in underlying emotional, mental, and spiritual patterns. The date of preparation and harvest location are often selected with great care, and the flowers selected at their peak vibrancy and according to their resonance with the harvester. The use of intuition in this process is key. The mind-body-spirit experience requires an open heart together with prayer or positive intention. The initial water infusion occurs in the sunlight, creating a "mother essence," and this mother essence is then further diluted (and, paradoxically, potentiated or made stronger) to make the final dosage. See *Boundaries in a Bottle: Yarrow Flower Essence, p. 109.*

HERB-INFUSED OILS, LOTIONS, AND SALVES

Herbal oils offer versatility and a wide range of applications to the herbalist's practice. They can be used as simple massage or first aid oils. With additional ingredients like

water or beeswax, infused oils may form the base of topical lotions, creams, or salves. Infused oils should be distinguished from pressed oils such as coconut oil, olive oil, or sesame oil, all of which are drawn out of seeds or fruits. Infused oils also differ from essential oils, the highly concentrated volatile oils secreted from the oil glands of plants. In contrast, an herb-infused oil is easily made by steeping medicinal herbs in a neutral carrier oil for a short duration of time. See *Bottled Sunshine: St. John's Wort Oil, p. 101,* and *Self-Heal Salve, p. 143.*

Fresh lavender, part of a spa treatment

HERBAL SITZ BATHS

Taking a sitz bath in herbs like goldenrod or Joe Pye weed involves sitting in a shallow tub and immersing the buttocks and hips in warm water. It is meant to soothe and cleanse the perineum and sensitive vulval, scrotal, and anal regions. A sitz bath can be taken for hygiene or to alleviate itching and irritation in those areas. Sitz baths can be comforting aids in the recovery process after surgery or childbirth. You can simply fill a bathtub with four to five inches (10 to 13 cm) of warm water or use a special sitz basin designed to sit on the floor or atop a toilet. Warm water alone can bring

nourishing circulation to the region, but a sitz bath can be enhanced by adding medicinal herbs and teas to encourage healing. See *Goldenrod Sitz Bath, p. 93.*

HERBAL SPRITZERS

Spritzers can be made from a plethora of different herbs soaked in a medicinal base, such as distilled witch hazel, rose water, aloe vera gel, vinegar, or a blend of water and alcohol. Jewelweed infused into witch hazel for several weeks, for example, makes a top-notch skin spritzer for inflamed, itchy skin. A skin spritzer can be kept in the refrigerator, making a quick cooling remedy for kitchen burns and cuts. It can also be part of a travel first aid pouch for easy relief from various bites, stings, or burns while on the road or in the field. Add a few drops of lavender or tea tree oil for an extra layer of relief; lavender is cooling and soothing to itching, pain, and sunburn, and both lavender and tea tree oils are antiseptic and antifungal. See *Jewelweed Skin Spritzer, p. 95,* and *Echinacea Herbal Burn Mist, p. 135.*

Sunshine brings out an array of colors in various herbal preparations.

23

{ Boneset }

Genus and Species: Eupatorium perfoliatum
Family: Asteraceae

A bitter, strong-acting addition to any natural medicine cabinet

Boneset is a long-revered North American native perennial that grows in colonies in wet soils, ditches, streambanks, meadows, and prairies throughout the eastern United States and Canada. Standing two to four feet (0.6 to 1.2 m) tall, the plants bear roughly textured leaves characteristic of the botanical name, perfoliate, meaning “through the foliage.” Indeed, the opposite, lance-shaped leaves pair up and wrap around as if the stem had punctured a single leaf. Pairs of leaves develop all along an erect stalk, giving the plant a uniquely wiry appearance.

During the late summer months, boneset produces flat-topped clusters of small, fluffy flowerheads. Close inspection reveals that each individual flower on the umbel, or flat cluster, measures about a sixth of an inch (4.2 mm) wide

and is composed of a dozen or so individual white flowers called disk florets.

Highly sought by wildcrafting herbalists, boneset flowers are slightly aromatic, but the leaves are extremely bitter to the taste. Some herbalists claim that boneset was at one point the most commonly used medicinal plant in eastern North America. This herbal remedy is embraced by southern Black communities, embodying a legacy passed down from ancestors whose proficiency with herbs was born out of necessity. The history of boneset is intricately interwoven with its heritage of use by Black herbalists to tend to illness in themselves and their families. Learning of its virtues from Native Americans and likely from Black healers, colonial doctors incorporated boneset into their practices, and the plant became both a mainstream remedy and a regular feature in medicinal gardens.

THERAPEUTIC USES

The origin of boneset's common name implies its use as a poultice or in bandages to heal broken bones, and some contemporary herbalists still rely on boneset for healing bones. Many say this use was inspired by its physical appearance, with leaves wrapping around its stem much like a bandage around a splint. Others cite the use of boneset tea during 18th-century dengue fever outbreaks as the source of the name. This disease, also known as "bone break flu," causes severe bone and joint pain, and boneset tea was the proven remedy of choice.

Boneset may provide a valuable remedy for fevers and flu, especially those accompanied by all-over aches and

pain. In a warm tea, boneset is a powerful diaphoretic that alleviates systemic heat and discomfort through perspiration, a result traditionally considered lifesaving. Today, it is well known that boneset contains immune-supportive compounds that assist the body under duress. It can also help clear sinus congestion. As a cold infusion, boneset is used as a cooling tonic to regulate digestion.

Note that all parts of the plant are incredibly bitter, making this not the most palatable of remedies. Boneset tea can be flavored with honey, lemon, or juice, or an herbal syrup to offset its bite. Boneset syrup or tincture can be added to cool or warm water, depending on the nature of the malady. Boneset is most commonly reserved for use on an acute, as-needed basis and not generally taken over long periods of time. Boneset taken in excess may cause nausea and digestive discomfort; historically, large doses of the herb have been used as an emetic.

A field of boneset in flower

Boneset Syrup for Winter Ailments

A boneset syrup can be a convenient and effective remedy to have on hand during cold and flu season. To make a boneset syrup, first prepare a decoction by pouring one quart of water over a handful of dried boneset leaves and flowers and bringing to a simmer. Allow this to bubble gently for at least 20 minutes, stirring occasionally, then strain through a cheesecloth. Measure the resulting liquid and then measure an equivalent portion of sugar. Return the decoction to the pot and stir in the sugar over low heat. Keep stirring until the sugar dissolves. While the mixture is still warm, pour the syrup into glass bottles, seal, label, and refrigerate for up to six months.

24

{ Cleavers }

Genus and Species: Galium aparine
Family: Rubiaceae

A sticky spring succulent to refresh lymphatic flow

Cleavers is the bright green badge of spring, clinging proudly to clothing: a sure sign that someone has been romping in the wild. This common annual is a climber, using its bristly, barb-shaped hairs to attach to fence posts, tree trunks, and hedges. It grows in a vining pattern near wet ground, pastureland, waste places, meadows, and roadsides. Lightweight cleavers stems are rough and hollow but juicy and succulent. This leggy plant gives rise to lime-green, lance-shaped leaves encircling the stem in whorled groups of six to eight. Its tiny, star-shaped blossoms are composed of four white or greenish petals, which sit upon the delicate stems that emerge from the leaf coil. Fuzzy burred fruits appear later in the season, fulfilling their goal of dispersal by sticking valiantly to fur, hair, or clothing of animals, including humans, passing by. By late

spring, once verdant cleavers plants tend to get stringy and yellowed, marking the end of their vigorous growing season.

A brimming basket of cleavers is a light load for the herbalist to carry. It is best to harvest cleavers plants at their robust peak of lush green juiciness, just before they go into flower. All the herbaceous, chlorophyll-rich parts of cleavers are edible, but the sandpapery texture of the fresh leaves and stems might be abrasive to the delicate tongue. These parts are more palatable when they are finely chopped in pesto or cooked into soups and other heated dishes, thus rendering the bristles limp and harmless.

THERAPEUTIC USES

Herbalists consider cleavers juice, or succus, a prized spring tonic. It contains gentle compounds that can stimulate the lymph to clear edema and other stagnation. Cleavers is considered appropriate for premenstrual water retention, swollen breasts, post-injury swelling, and mild lymphedema. This classic spring green has a reputation for cleaning out toxins and winter debris from the lymph tissue and moving the blood. Tincture or herbal infusions of cleavers can also assist the body in cases of tonsillitis and ear or respiratory infections. This safe lymphatic herb has gently relaxing properties and can help calm a cough and lend expectorant support.

Herbalists much prefer the use of fresh cleavers in their herbal preparations. A simple herbal infusion of fresh cleavers taken daily is an effective alterative, ideal for cleansing and nourishing the blood, alleviating achy or stuck joints, and resolving inflammatory skin issues. A gentle detoxifier, cleavers helps cleanse the liver and generally remove toxins from the body. Moist cleavers has a cooling effect and makes the perfect ally for those who run hot and inflamed. Because of this refrigerant nature, cleavers makes a supportive tea for any acute issue involving heat and inflammation. As a gentle diuretic, cleavers improves urine flow and is ideal for easing the delicate, irritated tissues of the urinary tract. Cleavers also makes a refreshing topical wash or wet poultice for sunburn, blisters, ulcers, and other heated eruptions. The plant’s juice has been used to cleanse oily skin and counteract rashes or itchy conditions.

The fuzzy seed heads of cleavers cling to cloth and fur.

Spring’s Green Juice: Cleavers Succus

Gather a few fresh handfuls of the aerial parts of cleavers and give them a light rinse in cool water. Shake off any excess moisture, then process the cleavers with a wheatgrass juicer. If you don’t have a juicer, you can blend the cleavers in a food processor and then press the mash through cheesecloth to expel the juice. To preserve this succus, add one part grain alcohol to three parts cleavers juice and store in a jar with a tightly sealed cap in the refrigerator for an adult remedy. Otherwise, drink the fresh succus immediately by the ounce, or freeze it into ice cubes for future use. Green cheers!

..... 25
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{ Goldenrod }

Genus and Species: Solidago spp.
Family: Asteraceae

A common wildflower to allay seasonal irritations

Goldenrod is a perennial that thrives across North America. Its abundant, showy stalks and sunny tufts of delicate flowers are prized in European gardens, though in many Asian countries goldenrod has established itself as a highly invasive weed. It especially likes bright fields and open meadows, and in some locations this persistent plant might be the first botanical to establish itself after an area has been disturbed.

Goldenrod grows to between two and six feet (0.6 and 1.8 m) tall on dark green, erect-to-arching stems. Its narrow, alternate leaves have parallel veins and might be fuzzy underneath. Late summer gives rise to goldenrod's distinctive canary- colored plumes, composed of several stems emerging from the sturdy center stalk and exploding into elongated clusters of yellow flowers.

Goldenrod flowers and leaves are easy to harvest—with a good field guide in hand. Although *Solidago canadensis* is the most popular medicinal variety, there are many other common species worth knowing. Goldenrod tops can be harvested by clipping off the flowering stalks when they are in full bloom. Herbalists will assert that the fresh or wilted plants make potent medicinal extracts, but the stalks can be hung to dry until crisp and saved for later.

THERAPEUTIC USES

While goldenrod’s showy blooms often take the blame for seasonal allergies caused by ragweed, this plant can actually help clear up the runny, weepy, or watery symptoms associated with all kinds of allergic reactions. Taken as a tonic over time, goldenrod can remarkably boost resistance to allergens by strengthening the integrity of leaky mucus membranes. The gentle astringency of a tea or tincture made from the flowering tops dries up the drippiness of colds and flu, while also eliciting a gentle sweat that can cool down a fever.

Goldenrod’s antiseptic nature can also soothe vaginal infections or bring relief from the discomfort of a full prostate when used in a sitz bath. Especially in tea or a tincture added to tea, goldenrod acts as a gentle diuretic to help flush the bladder and encourage urination, so it can be taken as a tea for those who have issues draining their bladder. It is often seen in herbal formulas designed to eliminate kidney stones. In those with sharp musculoskeletal aches attributed to gout-like conditions, goldenrod tea may help flush uric acid buildup.

An infused oil of this powerful weed can also be applied to tense and painful joints or crampy and sore muscles. Weepy wounds and skin irritations are often soothed by a drying poultice or salve of goldenrod.

A nourishing tea made from the summery flowering stalks can be uplifting, alleviating melancholy during long, dark winters. Goldenrod is high in flavonoids and other antioxidants, including rutin, which is important in maintaining blood vessel health. Its ability to strengthen the circulatory system makes goldenrod a wonderful tonic for protecting many vital organs, including the thyroid, eyes, and heart. When infused into vinegar, goldenrod is a favorite among herbalists for supporting healthy bones. As a bonus, all parts of goldenrod are edible and can be added to salads, soups, and other recipes. Many herbalists draw inspiration from and give acknowledgment to Native American healers

and their continued creativity with goldenrod in the medicinal kitchen.

Goldenrod flowers, sunshine yellow

Goldenrod Sitz Bath

To make a comforting and cleansing goldenrod sitz bath, add a couple of handfuls of freshly chopped flowering tops or one ounce of dried goldenrod flowers to one gallon of water and bring to a simmer in a large pot for five minutes. Remove this from heat and let it cool until still warm but safe to the touch. Transfer this amber-colored infusion to a sitz bath basin, adding water if necessary for the water level desired. Sit and soak in the basin for 15 to 20 minutes. Afterward, be sure to dry the treated areas with a soft clean towel, gently patting and not rubbing, and be sure to clean the tub thoroughly between uses.

26

{ Jewelweed }

Genus and Species: Impatiens capensis
Family: Balsaminaceae

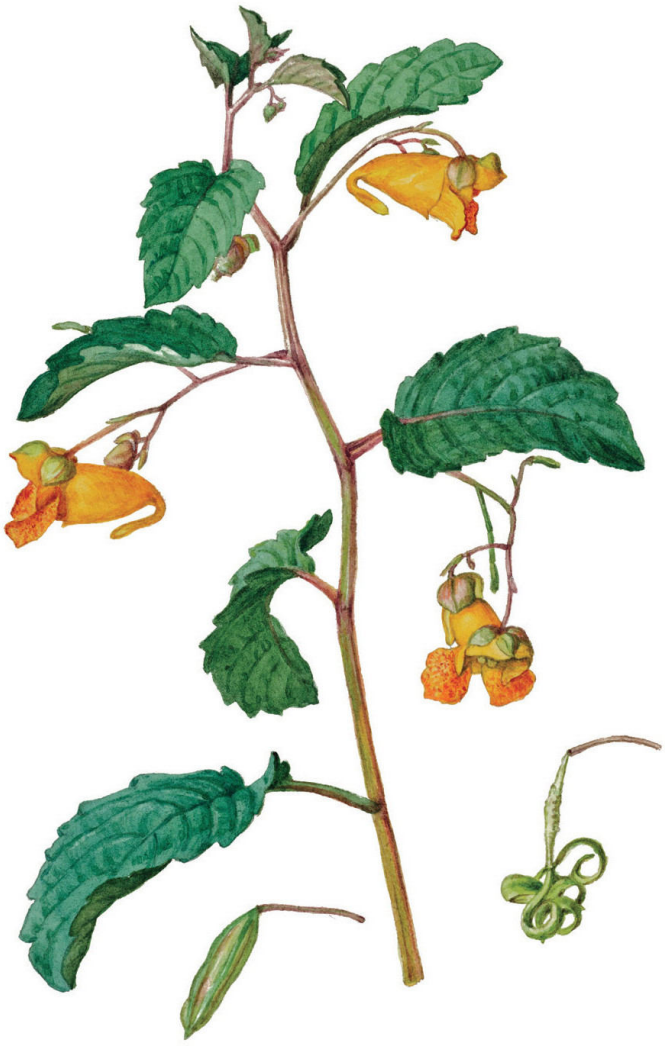
A succulent plant packed with cooling, soothing mucilage

In the early morning, silver droplets of dew ornament each jewelweed. Submerged in water, this herb's bluish-green oval leaves shine with an iridescence reminiscent of fine silver. This jewel of North American forests is also known as spotted touch-me-not, for its characteristic dotted orange flowers and projectile seeds. It grows in dense patches along ditches, streams, fence lines, moist fields, and forest edges.

At the prime of summer, jewelweed reaches hip height, standing on translucent, often speckled, succulent green stems. The cornucopia-shaped flowers dangle from delicate drooping stalks. From a visiting insect's point of view, the entrance of the three-lobed flower is splattered with reddish dots and graced with a curved nectar spur in the back. Soon the flowers ripen into seedpods that, when touched or

grazed, flick their reproductive seeds an impressive distance.

Shallow roots anchor jewelweed loosely in the damp areas it loves. Interestingly, jewelweed grows prolifically around areas that are also dense with poison ivy—the bothersome plant whose allergic rash the jewelweed can prevent or treat.



For direct topical application in the field, a tall juicy plant with a healthy stem is ideal. The stem should be crushed and mashed into a pulp with hand or knife and then applied to the skin immediately after contact with poison ivy or other bothersome plants. A spit poultice of jewelweed is

inadvisable: Some find the juice to be too acrid and potentially irritating to the back of the throat. Note that the fresh plant wilts very quickly, diminishing its medicinal value somewhat, so jewelweed should be the final plant harvested on a foraging expedition before heading back for remedy making.

THERAPEUTIC USES

In many rural parts of the United States, jewelweed is well known for its healing virtues. The succulent stems in particular are full of soothing mucilage that can offer cooling relief from itching and burning associated with such skin irritations as bug bites, burns, and rashes.

Jewelweed is also thought to actually neutralize the toxins in poison ivy just as they are exposed to the skin, so it can be used as a preemptive cleansing agent. Many hikers and outdoor enthusiasts have learned to trust this method of rash prevention.

If your skin has unintentionally grazed a poison ivy vine, simply look around for nearby jewelweed and break a stem open. Crush it, squeeze its juices onto the affected area, and wipe the area with the wad of herbal material wherever exposure is thought to have occurred.

Herbalists also rely on the cooling relief of jewelweed for poison ivy rashes that have already developed. Jewelweed preparations can be kept on hand for inflammatory skin issues as they arise. One such remedy can be made by decocting jewelweed in a pot of water until the liquid turns a beautiful copper color, and then freezing this tea into convenient ice cubes ready to be applied as a cooling topical. Others might juice jewelweed stems, adding a small amount of grain alcohol to maintain a shelf-stable application that is ready for use. Another favorite method is to gather jewelweed stems, crush them, and infuse these in

distilled witch hazel for a double-duty anti-inflammatory and astringent skin soother.

Bright orange jewelweed flowers dangle from the stalk.

Jewelweed Skin Spritzer

To make a skin spritzer, harvest a few handfuls of the aerial parts of jewelweed, including stems, flowers, and leaves. Crush the plant by hand or with a knife to loosen its sap, and place the material in a jar before adding witch hazel distillate until the jewelweed is fully submerged. Shake the contents of the jar twice a day; the infusion should turn a bright rosy gold. After two weeks, strain and divide the infusion into one- or two-ounce spritzer bottles. Add five drops of lavender essential oil to each ounce of infusion. Refrigerate the bottles and use as needed for burns, rashes, stings, itchiness, and exposure to poison ivy.

{ Joe Pye Weed }

Genus and Species: Eutrochium purpureum
Family: Asteraceae

A wildflower with an affinity for the kidneys

The perennial Joe Pye weed, a North American native also known by the common names queen of the meadow and gravel root, bursts into showy flower during the late summer with heady mauve blooms that persist until the first frosts. It shows up in picturesque abundance, attracting a plethora of bees and butterflies to the sides of roads, along streams, and in moist open fields, marshes, and other damp areas. A typical plant can reach from three to seven feet (0.9 to 2.1 m) tall or more, depending on the species. Its shallow, firmly anchored roots are tough, fibrous, and slightly apple-scented. These rhizomes spread horizontally, forming densely matted colonies.

The erect stem supports a large puffed dome (an inflorescence) of rosy pink to purple flowers at the very top. Upon closer inspection, this “puff” is actually composed of several flower clusters, or flowerheads, each in turn composed of several florets, a structure typical of the Asteraceae plant family. The variety sweet Joe Pye weed *(Eutrochium purpureum)* has long, serrated, lance-shaped leaves arranged along a green stem where they emerge from purplish leaf nodes in whorled groups of three or four. The spotted, often shorter variety, *Eutrochium maculatum,* has four to five leaves per whorl that emerge from a speckled purplish stem. Both spotted and sweet Joe Pye weed are interchangeably sought out for their valuable attributes. All parts of the plant are harvested for medicine, though the root is most popular.

THERAPEUTIC USES

Joe Pye weed enjoys a long tradition of herbal lore in the folk tradition. Closely guarded stories of its use are passed among generations of Native American communities who place important value on the plant as a wound wash and a bath addition to soothe small children, and in treatments meant to reduce body aches and pains. Legends abound,

but historians believe Joe Pye was the nickname given to an early 19th-century Mahican herbalist named Joseph Shauquethqueat, who used plants local to the northeastern United States to treat a range of ailments, including typhoid fever. The common name “gravel root” alludes to its established reputation as an herb that clears gravel, or kidney stones, from the urinary tract. Even the U.S. Pharmacopoeia included gravel root in its official listing between 1820 and 1842. A tincture or decoction of the roots can be given to help prevent stone buildup in both the kidneys and gall bladder.

An effective diuretic, Joe Pye weed is used by herbalists in issues related to swelling, water retention, and edema. It is especially valuable in any situation that involves burning irritation or mucus discharge during urination. Its astringent properties can help tone and strengthen the bladder in cases of incontinence in adults and children. Because this herb assists in elimination via the kidneys, it is often taken to clear buildup of inflammation in the joints and reduce the pain of gout and rheumatism. Its leaves and flowers can be given as a warm diaphoretic, or sweat-inducing, infusion to gently cool down a fever and soothe symptoms of the common cold. Overall, Joe Pye weed may have the effect of relaxing, neutralizing, and calming the nerves.

A field of Joe Pye weed in full bloom

Tincture Making 101: Joe Pye Weed

Place small pieces of fresh Joe Pye weed root in a jar until almost filled. Cover with a menstruum, or solvent, the liquid aspect of a tincture: Plain vodka or rum works well. Place the lid on the jar and shake several times a day. Now the herb is macerating. After two to three weeks, filter the tincture by squeezing the liquid and wet plant material through several layers of cheesecloth by hand. Store the finished tincture in a dark amber glass bottle away from light and heat. Take up to two dropperfuls at a time in warm water to support the organs of elimination. Consult an herbalist for more specific dosage instructions.

28

{ Red Clover }

Genus and Species: Trifolium pratense
Family: Fabaceae

A nutrient-dense cover crop to support human and planetary health

In spring and summer, lawns, vacant lots, and roadway edges become speckled with the welcome weed, red clover. A member of the legume family that originated from Europe, northern Asia, and Africa, red clover has firmly established itself throughout the Americas. It is often found in pastures and open fields, where it has been planted as a cover crop due to its ability to fix nitrogen in the soil and to provide abundant, nourishing feed for grazing livestock. With its dense pinkish-purple flowerheads and verdant green leaves, this plant is easy to identify. The flowerheads are composed of many tiny tubular florets, each with a base of the sweetest nectar. Its alternate leaves are assembled in a trifoliate pattern, or in leaflets of three. *Trifolium pratense* translates into a straightforward

description: “three leaves in the meadow.” The lower leaves of red clover have a long stalk, while those that grow higher up on the stem have little or no stalk. Notably, each of red clover’s oblong leaflets is marked with a pale chevron shape.

Harvesting red clover blossoms is a wonderful way to connect with nature on a sunny summer day. Simply pluck the colorful flowerhead and its top three leaflets straight into your harvest basket. The flowers can be utilized fresh for food or medicine or dried for future use. It is very important to dry and store red clover blossoms carefully, because if they are exposed to sun or excessive humidity while drying, the bright flower will turn a rusty brown, whereas red clover blossoms dried properly retain their purple color.

THERAPEUTIC USES

Red clover enjoys a storied history as a healing herb with a long list of uses. The edible flower is a common ingredient in traditional folk herbalism blends for cancer. Scientific evidence has revealed that red clover contains isoflavones that may offer protection from certain types of cancers. These compounds are considered phytoestrogenic, which means that they look similar to and behave somewhat like the hormone estrogen. Red clover has been used by herbalists to offer hormonal support to those with menopausal hot flashes and bone loss. It is also used for teens with hormonally active acne, and even for those with prostate issues.

Red clover is a dense source of minerals. A daily infusion of the dried bloom can be consumed for its nutritive quality, while an infused vinegar is regarded as a bone-building remedy. Red clover also has a reputation for being a blood-cleansing alterative and a lymphatic stimulant. Consuming a nourishing infusion of this herb can provide detoxification support, gently assisting the liver and helping clear skin inflammations. Red clover also exerts a mild antispasmodic effect and can calm cramping and tightness. A syrup of the blossom can be an expectorant, taken to calm bronchial spasms and coughing associated with upper respiratory infections. A concentrated red clover tincture may also help clear tonsil stones and lend movement to congested lymph tissue. As a topical remedy, red clover is a common ingredient in salves, poultices, and liniments and has often been used externally to minimize the irritations of eczema, psoriasis, burns, and sores.

Red clover infusion, made from leaves and flowers

Nourishing Red Clover Infusion

To prepare a nourishing red clover infusion, place one cup of dried red clover flowers, leaves, and stems in a quart jar. Bring a pot of water to a boil and pour the water over the herbs until the jar is full. Lid tightly and let it steep overnight (5 to 10 hours). This long steep time is conducive to optimal mineral extraction for this ultra-nutritive herb. Strain the result, squeezing the liquid from the clover, and drink warm or chilled over the next day. You may add lemon or honey to taste, or aromatic herbs such as peppermint, lemongrass, or orange peel. The infusion may be stored for up to two days in the refrigerator.

29

{ St. John’s Wort }

Genus and Species: Hypericum perforatum
Family: Hypericaceae

A sunny classic of optimism, strength, and lightheartedness

St. John’s wort is one of the most commonly used herbs around the world, and for good reason. It grows well in locations with full sun, including meadows, open roadsides, and pastures. It can spread aggressively from rhizomes under the ground, creating dense patches of plants that crowd out other vegetation. This Eurasian species of St. John’s wort grows abundantly in many parts of North and South America, Australia, New Zealand, and Africa.

St. John’s wort is a creeping and branching perennial that can grow from one to three feet (0.3 to 0.9 m) in height from its woody base. The taller branches contain numerous clusters of bright-yellow flowers, each made up of five petals arranged in a halo formation around a bundle of long, prominent stamens. The blooms measure around an inch

(2.5 cm) in diameter, and each one is lined with small dark dots around the petal perimeter. When crushed or rubbed for use in herbal preparations, the flowers exude a reddish juice. Upon close inspection, when the leaf is held up to the light, a scattering of tiny translucent circles is noticeable on the surface.

This plant’s common name refers to the traditional harvest of the flowers at the peak of summer, on or around the holiday honoring St. John the Baptist, June 24. Harvesting St. John’s wort flowers around this time of the summer solstice can be one of the most blissful wildcrafting

experiences. The flowers are the key part of the plant, but clipping the top five inches (13 cm) of the plant—including the blossoms, buds, and leaves—simplifies the experience. A basket and pair of scissors are all that is necessary for harvest. Since most herbalists prefer to utilize fresh St. John's wort, some make arrangements for processing the herb immediately after picking, bringing it home to a ready kitchen, making medicine tailgate-style at a waiting vehicle, or even processing it in the field. It is important to harvest only the common Eurasian species of medicinal St. John's wort as opposed to its many global relatives, which are less common. Expert identification is warranted so as not to harvest from the wide variety of nonmedicinal and often ecologically at-risk species of *Hypericum.*

THERAPEUTIC USES

St. John's wort has a long tradition of old-world medicinal use dating back to premedieval times. Lore suggests magical practices, including warding off evil spirits by hanging bundles of the herb around the home; modern research suggests it might help soothe mild to moderate depression. The tincture, tea, or capsule is recommended by herbalists for nerve conditions and anxiety. The oil applied topically can be useful in the management of sciatica, carpal tunnel syndrome, numbness, and neuropathies from diabetes or chemotherapy. The infused oil of St. John's wort is also an important part of any first aid kit, due to its antibacterial activity and its ability to ease pain and inflammation from injuries, burns, and other skin conditions. St. John's wort is effectively antiviral and has been used in formulas to manage viral outbreaks such as herpes, shingles, hepatitis C, HIV, and flu. Given the popularity of St. John's wort supplements these days, much is known about its interactions with pharmaceutical drugs; it is important to

seek guidance from a clinical herbalist or medical practitioner before using St. John’s wort in combination with many prescription drugs.

Oil made with St. John’s wort flowers

Bottled Sunshine: St. John’s Wort Oil

Harvest a few handfuls of St. John’s wort blossoms and buds and chop them up. If the harvest day is dry, the tops can be wilted for an hour by allowing them to lie in a shallow basket. If the plants seem dewy, let them wilt overnight. Fill a small jar with the fresh herb and top with olive oil until the plant is fully submerged. Seal the jar and leave it in a sunny spot for 10 days, shaking daily. The oil should turn a beautiful shade of red within a few days. At the end of the steeping period, strain the oil through cheesecloth, gently squeezing it from the plant material, and decant into a glass container. The infused oil will keep up to one year.

..... 30 .....

{ Sumac }

Genus and Species: Rhus spp.
Family: Anacardiaceae

A sour, fuzzy berry to astringe and tone

That red powder dusted on your favorite falafel or hummus? It's sumac. There are various medicinal species of sour sumac berry on every inhabited continent. Syrian sumac *(Rhus coriaria)* is the source of the famous culinary spice originating from regions of the Mediterranean and the Middle East. Smooth sumac *(Rhus glabra)* is native to the continental United States, especially in the East, with its region extending south toward Mexico and north through parts of Canada.

In North America, the deciduous shrub grows in dense colonies, each supported by a short, leaning trunk. It is best known for its crimson-to-burgundy spindle-shaped berry clumps, which create a striking burst of autumnal color—skyward-pointing clusters that attract birds and indicate a high level of bright polyphenols.

Smooth sumac berries have a felted texture but are sleek in comparison with those of staghorn sumac *(Rhus typhina),* which has furry berries and branches lined with an antler-like fuzz. The two species are used interchangeably by medicine makers. But these varieties, popular among herbalists, are not to be confused with the wetland-loving poison sumac *(Rhus vernix)* and its hanging clusters of white berries. Most Rhus species' red berries are edible, but those that produce white berries, like poison ivy *(Rhus toxicodendron),* are poisonous. Sumac leaves are not edible.

THERAPEUTIC USES

Though dry and fibrous, tart sumac berries are edible. In Middle Eastern and Mediterranean cultures, Syrian sumac berries are ground and mixed with an assortment of savory dried herbs such as cumin and oregano to make za’atar, a savory herbal blend. This Syrian sumac species has received

more research attention than the American species, and it has been found to be beneficial to the cardiovascular system, supporting a healthy lipid balance. Syrian sumac is also a vibrant anti-inflammatory and may help people with diabetes due to its abundance of anthocyanins.

Sumac enjoys a long tradition of folk use as food and medicine. In southern Appalachia, old-fashioned sumac lemonade sources its flavor from sumac's lemony, astringent berries. This pink antioxidant-rich quencher is considered a refrigerant, meaning it can help the blood to disperse and the body to cool. Sumac-ade can be crafted as a sun tea or by infusing berries in steaming water and then pouring the tea over a glass of ice.

High in vitamin C, sumac can be taken at the first sign of a cold. Crafting a sweet glycerite is an excellent way to capture the rich color and puckering quality of sumac berries. Sumac also makes a valuable herbal syrup, especially tonifying to irritated membranes such as a sore throat. Due to its astringency, it has also been considered a useful remedy to help control urinary incontinence. Sumac can be dispensed as a tincture, although its pleasant tangy flavor means many herbalists add the dried berries to tea blends. The potent tannins in sumac berries are known to be antibacterial. One folk remedy involves grinding the dried berries and mixing them with clay powder to use as a dusting for oozing skin outbreaks and damp wounds.

A lush stand of sumac bushes, red berry clusters held high

Make a Sumac Berry Glycerite

Gather a few clusters of sumac berries. Pluck the berries off the cluster with a fork to fill a pint or quart jar most of the way. In a separate container, preblend two parts vegetable glycerin to one part water, enough to pour over the berries and fill the jar. Place a tight lid on the jar and shake the mixture every day for at least two weeks. Then strain out the berries by running the herbal glycerite through cheesecloth and squeezing out any excess liquid by hand. Store the strained sumac glycerite in an amber glass bottle for up to two years. Take it by the dropperful or use liberally to flavor sodas, water, cocktails, or mocktails.

..... 31 .....

{ Violet }

Genus and Species: Viola odorata
Family: Violaceae

A humble garden weed to calm and clear

The joy of violets! Their shy presence reminds us that the vernal season is emerging. Many recognize violets easily by their indigo-tinted blossoms propped up on tender, slender stems. While sweet violets bloom a deep purple color, they can also exhibit a palette of soft blues, pinks, and whites. Each delicate blossom is composed of two lateral petals, two upper petals, and one spurred bottom petal. The greenery of the violet is lush and characterized by dark green leaves. Growing low to the ground in a basal rosette, the leaves are heart-shaped and slightly scalloped. Violets can be found plentifully scattered throughout lawns, along the edges of forests, and in wild clearings.

One secret of violets is that they claim not one, but two, different kinds of flowers. First their “chasmogamous”

flowers are the delicate, recognizable ones we see in the spring. These mingle with other wild violets and set seed normally. Then, in late summer, their “cleistogamous” flowers emerge, hidden surreptitiously under the leaves. While they never open, these pale flowers pollinate themselves inside their closed pods and pop out their seeds come autumn.

PARMA VIOLET
(VIOLA ODORATA—*var. parmensis*)

THERAPEUTIC USES

All parts of the wild violet can be harvested for food or medicine, though they have distinct properties. An infusion of violet blossoms may gently stimulate the lymphatic system. This gentle spring tonic—made from the very flowers that signify winter is over—is revered by herbalists for clearing swollen lymph nodes and stubborn lumps. Violets may be dried for tea blends or used fresh to make long-steeped infusions, herbal vinegar, medicinal honey, and tinctures. The slippery, mucilaginous leaves are crunchy and mild in flavor and can be added fresh to salads or cooked into delicious soups.

Violet flowers are ancient tokens of love and are used aesthetically for their delectable beauty. Bakers candy violet blossoms and use these floral gems to decorate cakes and other desserts. The vitamin C–rich blossoms and demulcent leaves of violet can be infused in honey and used as a gentle, comforting expectorant for respiratory congestion. The most deeply colored blossoms are high in the antioxidant bioflavonoid rutin, known to strengthen the veins and fortify small capillaries. Plants high in rutin help improve the condition of varicose and spider veins, prevent hemorrhoids, and strengthen circulation in the eyes. People prone to easy bruising could drink an infusion of violets to strengthen delicate blood vessels over time.

The flowers and leaves of violet can be made into an infused oil or salve and applied topically to soothe and minimize spider veins and bruises as well as stubborn skin conditions like eczema, psoriasis, and impetigo. Poultices of the whole plant are applied topically to cool headaches, weeping eczema, and other hot skin irritations.

Paradoxically, this common weed, which emerges around April or May, has the potential to ease springtime hay fever. A tincture, vinegar, or infusion of violet blossoms may help minimize runny noses and itchy eyes during the height of the season. Consumed internally, violet’s salicylate-rich

leaves can help minimize pain and aches and aid in cooling a fever.

A bicolor variety of Viola odorata, or sweet violet

Violet Blossom Herbal Vinegar

Gently fill (don’t pack) a small jar almost to the top with fresh violet blossoms. Pour apple cider vinegar over the top until all the flowers are fully immersed. Lid the jar and set it on a windowsill at room temperature, shaking it every day for five days. Take delight in the transformation as the purple color migrates from the petals and tints the vinegar a deep scarlet. On day five, strain out the flowers using a mesh strainer or cheesecloth. Recap the herbal infused vinegar and store in a cool, dark place for up to a year. Bottle up small amounts to give as gifts or enjoy on fresh salads with olive oil for a nutrient-dense boost of spring floral color.

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{ Wild Black Cherry }

Genus and Species: Prunus serotina
Family: Rosaceae

An almond-scented tree bark to calm the lungs

The wild black cherry, also known as black cherry or wild cherry, is one of a foraging herbalist's favorite fruit trees. Wild cherry trees are native to the eastern portion of North America down through Mexico and Central America, although the trees also thrive in Europe as an invasive species. Younger trees have smooth gray bark speckled with horizontal pores called lenticels. As a tree matures, it can rise to a lofty 60 to 80 feet (18 to 24 m), and its bark becomes rough, scaly, and dark. Its leaves are a lustrous dark green on top and pale on the underside, and have a hint of fuzziness along the primary vein. Small-toothed serrations along the edges of each leaf distinguish this tree's foliage.

White flowers borne on drooping clusters later transform into the familiar red-to-black fruits. These wild varieties are

darker and smaller in color than the cultivated cherries you might find at a grocery store. They are edible, though not as sweet, and can be consumed fresh or used in recipes to create syrups or desserts.

THERAPEUTIC USES

While the fruit is loaded with healthy antioxidants, herbalists treasure the wild cherry tree bark for their favorite recipes. Careful harvesting of this bark is critical for the livelihood of the tree. It is important to never girdle, or carve a full ring around the trunk, as doing so will kill the tree.

A simple, safe way to gather wild cherry bark is to collect small twigs or freshly fallen branches, perhaps after a storm. A sturdy vegetable peeler can be used to shave the bark off in strips, being sure to include the light inner bark. The peeled shreds should exude a distinctive cherry-like scent, which some describe as akin to bitter almond.

This telltale aroma derives from a compound called benzaldehyde, combined with minute amounts of hydrocyanic acid (HCN), which is formed upon scraping. Cool water supports the abundance of HCN, while hot water will cause it to evaporate. For this reason, wild cherry bark is often used to make a cool-water infusion that may later be used to formulate a syrup or tincture without applying heat. HCN can be poisonous in some instances, but its presence in cherry bark (as in peach leaf) is deemed safe for humans, even children, and the compound is responsible for much of the remedy’s effectiveness.

In mild doses, the cyanogenic glycosides present in wild cherry bark syrup appear to have expectorant, digestive, and gentle sedative properties. Cherry bark is specifically used for short periods, up to 10 days, as an antitussive to calm the cough reflex. A relaxant, it can be used to calm lungs experiencing overexcitability, hacking, or restless breathing. As a bitter, it is cooling, giving it an extra edge when supporting someone with fever and a hot cough. The bitter tonic aspect of wild cherry keeps the digestive tract in check while the lungs convalesce.

Wild black cherry bark has been used by folk herbalists for centuries in many places around the world. Remember that herbalists do not use cherry leaves or roots internally, and cherry pits should never be eaten. Note, too, that many parts of the cherry tree are toxic to pets and grazing animals.

Delicate wild cherry blossoms and strips of wild cherry bark

Wild Cherry Bark and Maple Cough Syrup

A forager’s twist on a classic herbal remedy to calm coughs and induce expectoration is a soothing, calming, and delicious wild cherry bark and maple cough syrup. Unlike most herbal syrups, wild cherry bark syrups begin with a cool water infusion instead of a decoction. This tree-based recipe calls for strips of fresh green inner wild cherry bark infused in equal parts cool water, honey, and pure maple syrup. This mixture is shaken frequently and vigorously for a day or two. The fragrant cherry bark syrup is then decanted from the bark strips, bottled, and refrigerated. It’s best to make small batches of this cough syrup, as it is meant for short-term medicinal use.

{ Yarrow }

Genus and Species: Achillea millefolium
Family: Asteraceae

A versatile first aid kit in one capable plant

Yarrow is a common perennial often found along sunny meadows and open fields. Even when it's not in flower, this medicinal treasure trove is identifiable by its uniquely lacy leaves. Each tapers into a feathered shape, giving this species the name *millefolium,* referring to the fern-like appearance of "thousands of leaves." A mass of soft, delicate foliage makes up the plant's base; tracing upward, the leaves appear consecutively smaller. Yarrow leaves range in color from silvery to deep green. At the height of summer, flat umbrella-like disks made up of several compact clusters of flowers appear and last for some time. The tiny flowers are commonly white with yellow centers, but faintly tinted shades of pink or yellow also show up in some areas. Some yarrow plants also emit a powerful aroma ranging from sweet to spicy and pungent.

Yarrow is an abundant plant that is easy to find and a great joy for the midsummer harvester. Most herbalists seek out the fresh flowering tops and leaves, but some also appreciate the roots, harvested when the plant is not in bloom. A beginner should be cautious not to confuse this

plant with its midsummer lookalike, Queen Anne's lace. While these two plants bear a resemblance to each other in the eyes of the novice forager, they are quite different botanically. Most notably, Queen Anne's lace has opposite leaves rather than the alternate leaves of yarrow.

THERAPEUTIC USES

Yarrow has been hailed for its myriad medicinal qualities since antiquity. Perhaps best known for its wound-healing properties, its genus is aptly named after the ancient Greek hero Achilles, remembered for tending to the bleeding wounds of his soldiers just as yarrow does. Yarrow is a staple in any herbal first aid kit. Fresh and dried leaves have a notable reputation for use as a poultice to staunch the bleeding of minor wounds and cuts. Similarly, the herb is used as a tea or tincture internally to remedy heavy menses or internal bleeding. Bathing in a yarrow infusion or applying lotions and salves made with this herb may soothe itchy skin and eczema.

Gentle yarrow is often favored in cold and flu remedies for its ability to ease a fever, induce perspiration, clear congestion, and alleviate a sore throat. As a bitter, yarrow is appreciated for its stimulating action on the digestive organs and its ability to promote gastric secretions. Yarrow is useful taken with meals to prevent stomach discomfort, bloating, and flatulence and to promote bowel regularity for those who struggle with constipation. The roots of this versatile herb are packed with a tongue-tingling medicinal compound similar to that of echinacea. Tradition says to chew on them to relieve toothaches or other oral inflammation, and they can be tinctured as a remedy for acute immune challenges or infections. A flower essence of yarrow offers a special vibration believed to protect one's personal energy in the face of outside influences and chaos.

A close-up showing individual flowers of yarrow

Boundaries in a Bottle: Yarrow Flower Essence

Making a flower essence is a rich and magical way to connect with an herb. With yarrow, it’s best to make the “mother essence”—the original creation, from which to dose out smaller bottles—on a sunny summer morning when the plant is in full bloom. Place three to six vibrant flowerheads face down in a bowl of spring water and allow them to float in the sunshine for three hours. Strain this fluid through cheesecloth and pour it into an amber glass bottle, filling it halfway. Top the remainder of the bottle off with brandy. This mixture can be stored for several years and transferred into many smaller dosage bottles. To make one, fill a half- or one-ounce dropper bottle halfway with brandy, add seven drops of the mother essence, and fill the remainder of the bottle with spring water. Take three to five drops of this blend under the tongue to protect sensitive energies and fortify boundaries.

HERBAL HERITAGE

The Wise Woman Tradition

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To this day, much of health care worldwide is practiced by women at home. While homemade staples like chicken broth, chamomile tea, and sauerkraut might not seem like the definition of health care, these simple approaches to nourishment are the very foundation of holistic wellness. The more prominent figures in health care—doctors, alternative practitioners, village healers, and shamans from many lineages—are also key, and their work is more visible. In contrast, the wise woman way of healing is often subtle and sometimes even invisible. It is found in simple acts: preventing muscle soreness with a St. John's wort oil rub, warding off a cold with yarrow tea and garlic honey, or promoting lymphatic drainage with a violet vinegar salad dressing.

Some herbalists claim the wise woman way is the oldest tradition of healing on the planet: It is inclusive, all-encompassing, basic, and humble. It is represented by the midwives who hold space for the beginnings of life, by those who practice the handy or heart-centered skills of tending and mending bodies passed on over generations, and by the empathetic mothers, herbalists, and healers of all kinds who gather around the hearth or kitchen table. The wise woman is the kitchen herbalist, one who believes food and medicine can be interchangeable and complementary, and who uses common household ingredients for healing. This wise woman archetype embodies a hyperlocal approach to wellness, a

belief that whole, seasonal, fresh herbs and foods are best for maintaining whole, healthy bodies. This philosophy of wholeness is less about technique and more an overarching embrace of the relationship between weedy plants and the wild, messy, multifaceted human beings who constantly teeter on the seesaw of health and disease. In the wise woman way, illness and disease are not things to be feared but opportunities for transformation and journeys to dance along.

Two women gathering sage, illustrated in the medieval Tacuinum Sanitatis

HERBS OF THE WISE WOMAN WAY

In the wise woman tradition, herbs support, optimize, tonify, and help maintain balance in the various systems of the body, from the joints in the feet up to the brain stem. At the core is caring for both our bodies and the planet, accomplished by preferring plants growing nearby—weedy, abundant, local, and in season—rather than exotic remedies from faraway places. So often the medicine you need is easily accessible, and therefore sustainable. This medicine way elevates the common, ubiquitous weeds of the landscape and praises them for their very simplicity and availability. Decentralized, nonhierarchical, and based on intuition and accessibility rather than rigidity and privileged knowledge, the wise woman way is within the reach of anyone with an enthusiasm for the living world. The traditions are open to the entire gender spectrum. Anyone can resonate within the wise woman tradition and connect with the nourishing tradition.

Healer and medicine woman Naomi Love offers lessons

Using the green gifts of the earth to nourish our insides and outsides is our birthright, because as humans we have coevolved with plants. They are our oldest and most reliable form of healing, the earliest medicine, to which we owe our health even today, when medicine has by and large moved away from the plant-based remedies upon which it once relied. In fact, scientific research has now empirically validated many of the truths of wise woman health care, such as the value of garlic for a cold or hawthorn berries for a weak heart.

The wise woman way of herbal medicine making is not tied to any geographic location, set of rules, or cultural tradition. The practice combines folk remedies and time-honored wisdom, passed down orally over generations. Its principles of inner knowing are based on abundance rather than deprivation, benevolent acceptance rather than elimination or denial, and the restoration of well-being—

states of mind different from objectifying the body or envisioning a health condition as the enemy. The key words of this medicine path are nourishment, wholeness, and relationship or allyship between the green and human worlds. This paradigm of herbalism embraces how easy it can be to learn about the edible and medicinal plants of your area and incorporate simple remedies into your daily routine of self- and household care.

MEDICINE MAKING

Wise women make the art of medicine making as easy as possible. What could be simpler than pouring a menstruum of water, alcohol, glycerin, or vinegar over a jar full of crushed or chopped herbs and letting it sit for a few weeks? This type of remedy creation, the folk method, is designed to bring the concocter into relationship with the ingredients.

When we see plants as allies in our own health, rather than just a green wall out there, the possibilities for healing deepen. The spring weeds popping up in your lawn are no longer just something to be mowed, but a powerful adjunct to your wellness. Or, as in the case of so many wild medicinals, one person’s noxious weed is another’s favorite herbal treasure.

Conducts rituals within the wise woman tradition.

This tradition is steeped in ancestral knowledge, but it is far from static. It moves forward in simple recipes, in children gathering violets from the backyard and wild cherry bark from the forest to make a floral cough syrup, and in the tender loving care that comes from the plants themselves. Jeannie Dunn, who comes from a lineage of wise women, farmers, and wildcrafters, happily uses “weeds” in her handcrafted herbal tinctures, fermentations, and wildcrafted elixirs at Red Moon Herbs. An advocate of deep plant-based nourishment, earth-based healing, and using local and abundant plants at peak potency, Jeannie follows the cycles of the moon, seasons, and weather, continuing to draw on herbal wisdom passed down through the generations on her family’s farm.

A mandala offering made from herbs, flowers, and gifts from the earth

Her special passion of preserving endangered or rare plants aligns with wise woman ethics: “I like to think the popularity of the medicine of the common plant will one day allow some of the at-risk plants a chance for survival, as people turn back to their Indigenous roots and ‘eat the weeds’ again. May these plants that volunteer in your garden, city sidewalks, or patio pots find a special place in your heart and in your medicine cabinet.”

As she says, the same potential exists for urban and rural dwellers alike. The tendrils of cleavers growing in that shady garden bed or the bright heads of dandelion popping up in the cracks of the sidewalk are living proof that medicine is everywhere. In this way of thinking, even the word “medicine” widens and deepens to include nonconventional—yet traditional—syrups, body mists, salves, infused honeys and vinegars, infusions, and extracts.

In contrast to strictly scientific and dogmatic systems of medicine, this way of relating to local plants as allies in health is instinctual and organic. The wise woman tradition is grounded in a reclamation of what it is to be a human: to be wholly dependent on plants for life and breath. To some herbalists, it is even a reclamation of the weighted word “witch,” a term which originally meant “wise woman” or “woman who works with plants.”

This healer in Mexico City reads corn kernels as part of her healing practice.

Herbs Valued in the
Wise Woman Tradition

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CHICKWEED
Stellaria media

COMFREY
Symphytum officinale

MULLEIN
Verbascum thapsus

MOTHERWORT
Leonurus cardiaca

STINGING NETTLES
Urtica dioica

. . . . . .

4. Topical Herbalism

ALOE VERA
ARNICA
CALENDULA
CHAMOMILE
COMFREY
DRAGON’S BLOOD CROTON
ECHINACEA
GOTU KOLA
HORSE CHESTNUT
PLANTAIN
SELF-HEAL

Herbs add natural essences to handmade soaps, salves, and creams.

Herbs for the Skin You're In

The thought of treating one's skin to the healing wonders of topical herbs might evoke an aura of self-pampering indulgence. Who wouldn't enjoy the luxurious feeling of a lavender-scented calendula body butter? Or feel refreshed and elevated by a mist of comfrey facial toner?

Calendula flowers become an enriching skin cream. Photo courtesy Herbal Academy

As heavenly as topical herbs are, their story is also one of immediate practicality and downright messiness. A basic, chewed-up mash of plantain leaf is the ideal field poultice for wilderness first aid. A slimy gob of aloe gel lends instant comfort to burned skin. In the discomfort of a hemorrhoidal flare, quick relief can be found by resorting to sitting on a preparation of ground fresh horse chestnut seeds. For those feeling fungal in the jungle, the sticky sap of the gooey dragon’s blood tree is an ideal remedy.

A little forethought and preparation go a long way toward building a ready arsenal of topical remedies. A homeopathic arnica gel in the first aid kit stands by for traumatic bruises and sprains. The famously sweet chamomile in salve form sits on the patio, ready to dab on that next mosquito bite. Working with topical herbs fluctuates between elegance and messiness, but is endlessly satisfying and empowering.

Dried calendula flowers and the deep orange oil they produce

VERNACULAR OF VULNERARY

In this chapter, the spotlight is on vulneraries, or plants that are used as topical remedies for wounds. In Latin, the word *vulnus* translates to “wound,” with a related connection to the word “vulnerable” implying a susceptibility to damage or wounding. Vulneraries may be effective healers both inside and outside the body. They accelerate healing upon any surface they come into contact with, whether externally on the skin or internally along the digestive lining.

Several possible herbal mechanisms lend vulnerary activity to a remedy. A topical herb such as gotu kola might renew damaged tissue by accelerating wound closure, while herbs such as calendula penetrate deeper to promote the formation of new connective tissue just under the surface. Wet applications of comfrey and Solomon’s seal reputedly reach underlying ligament and bone tissue to enhance cell proliferation and repair. Some herbs, including aloe, assist in rebuilding tiny capillaries for fresh restorative blood flow to torn tissues.

Dried herbs, carefully labeled for future use

TIGHTEN THE WEAVE

Herbs recognized for their astringent properties are among the most utilized medicines in topical care. Tissue-binding tannins are compounds in plants like witch hazel and rose, commonly used in skin-toning cosmetics due to their firming and contracting nature. Many astringent herbs like self-heal and plantain are vulneraries of their own accord due to their ability to draw tissues together, or “tighten the weave,” upon contact with a surface.

Applied to open wounds and weepy membranes, astringents bind to tissue to form a protective film that seals, minimizes secretions, and prevents bacteria intrusion. Astringent herbs also tend to be mildly styptic and can further aid wound care by stopping the bleeding of minor cuts and abrasions. The ability of astringents to strengthen

the meshwork of a membrane is demonstrated by their traditional use in repairing leaky blood vessels near the skin’s surface, as in the case of hemorrhoids, varicose veins, and spider veins. Like vulneraries, astringents aren’t just for the skin. They perform in a similar manner on the mucus membranes and along the gut lining.

Preparations under way using catnip leaves and chamomile flowers. Both photos courtesy Herbal Academy

FLARE CARE

Boasting one thousand nerves and several yards of blood vessels per square inch, human skin is bound to feel the heat from time to time. In the presence of an inflammatory or heat trigger, the combination of nervous system messaging with a cascade of responsive blood flow can quickly ignite a skin blaze. During an eruption, the seemingly angry nerve endings fire away, leaving a desperate agitation with symptoms of swollen, red, itchy skin. When histamines, radiation, stingers, and other irritants join this pyrogenic party, the external thermostat

can quickly rocket from a warm-to-the-touch sensation up to a blistering burn.

It is no wonder that so many topical herbs are both profoundly cool to the touch and calming to the nerves. A tepid bath in soothing mucilaginous emollients like oatmeal, peach leaf, or flax water can rapidly de-escalate the nerve endings. A wet poultice of plantain or comfrey leaf noticeably absorbs heat. A mist of cooling jewelweed or a chamomile ice compress leaves the skin feeling refreshed. Numbing anti-inflammatories such as spilanthes and echinacea are great choices for rapidly cooling flare-ups.

REV IT UP WITH RUBEFACIENTS

The paradox of topical herbalism is that despite the skin's design for innervation and circulation, sometimes a little stimulation is necessary to help rev up all systems. When things feel stagnant on the skin front—whether this manifests in conditions that are chronic, tinted bluish, or flaky, impaired blood flow and dulled nerve endings are often related.

Many people have a sense of whether heat or cool feels most therapeutic to a specific condition or injury. When heat is called for, an herbalist might, for example, add a touch of cayenne to a salve, valuing a rubefacient herb that stimulates blood flow to an area. Bed sores and diabetic ulcers may also benefit from herbs that generate warmth and circulation. Dull, stiff, and achy muscles can be helped by topical liniments such as arnica, especially when touched with the diffusive heat of ginger.

34

{ Aloe Vera }

Genus and Species: Aloe vera
Family: Asphodelaceae

A spiky succulent containing skin-healing gel

Aloe has distinguished itself as the most widely renowned topical herb used worldwide. Aloe originates from Madagascar, Africa, and the Arabian Peninsula, where an early trade hub carried it to distant lands along the Silk Road. Egyptian legend deems this succulent the plant of immortality and notes its place in the vanity regimens of exalted beauties including Egyptian queens Nefertiti and Cleopatra. Such fame has propelled aloe to the far corners of the world, where it thrives naturally in dry and subtropical regions and prospers in cultivation as one of the most commercially important botanicals in the natural skincare industry.

To this day, many people recognize aloe vera's characteristic rosette of plump, rubbery leaves that taper to thorny points, each lined with tooth-like edges. An expert in

water conservation, the regal aloe stands turgid even amid drought, storing water in specialized tissue that forms the familiar aloe vera gel contained in the inner leaf. A healthy mature plant sends up a solitary flowering spike that towers above the leaves, boasting a striking display with dozens of red-to-yellow tubular blossoms that will yield elongated seed capsules.

Households around the world revere aloe’s healing virtues, earning it a reputation as the quintessential houseplant. When aloe is ready to multiply, it produces offsets, or “pups,” which emerge from the base of the plant to form sprawling clumps not far from the parent. To the proud aloe tender, the pups are a welcome sight, often removed and placed in new pots for propagation or as a gift for neighbors, friends, and family.

THERAPEUTIC USES

Herbalists most commonly use the medicinal clear inner gel of the aloe leaf. This jelly-like pulp is a common ingredient in dermatological and cosmetic products because of its profound ability to penetrate and hydrate the skin. Aloe gel provides an abundance of age-defying antioxidants and tissue-regenerating enzymes and amino acids that preserve the integrity of collagen and elastin in the skin. As a vulnerary, the gel is known to stimulate skin cell growth, prevent scarring, and accelerate healing of burns and ulcers. The clear matrix of aloe gel has been studied internationally by scientists, who have identified within it the presence of immunity-boosting polysaccharides; these seem to rebuild

tiny capillaries that reinvigorate blood flow to damaged skin. This finding highlights aloe's use for treating frostbite.

Aloe's immune-nourishing properties make it useful as an all-over skin cover for those coping with chronic psoriasis, eczema, herpes, or acne. Herbalists rely on cooling aloe gel for a multitude of first aid situations, applying it directly to ulcerated skin for itch, bite, sting, hive, and sunburn relief. Antibacterial aloe gel is used in dental care as part of a general hygiene protocol to reduce plaque, prevent cavities, and heal the tenderness of gingivitis and periodontitis. It can also be used as a mouth rinse to help soothe sore or inflamed oral conditions.

Aloe vera's healing sap, oozing from inside a leaf

Taking Care With Aloe Gel

Aloe gel is easy to extract from a leaf if you hold one rule in mind: Keep it clear. The aloe leaf is composed of three layers: the green leaf, the yellow latex, and the clear inner gel. Juicing the whole leaf is not advised, and caution should be exercised when choosing supplements that contain whole aloe leaf. The yellow sap is rich in anthraquinones and has been used medicinally for its stimulating laxative properties. Taken internally, it can cause serious cramping and discomfort and has been associated with toxic side effects. Golden-hued aloe latex can also trigger allergic reactions in people who have a latex sensitivity.

35

{ Arnica }

Genus and Species: Arnica montana
Family: Asteraceae

A popular and powerful mountain aster that demands respect

A beautiful wildflower in its native mountains, *Arnica montana* is a fuzzy perennial with a dark or blackish root. The lower rosette is composed of dark green downy leaves. Along its long slender stem, the opposite leaves are smaller. The daisy-like flowers of these asters are showy, with orange-yellow heads that are erect or drooping.

Arnica's home range is Europe to Greenland, where it thrives in high alpine regions such as the Swiss Alps. It also favors habitats in Siberia and Alaska and cool, moist, and shady conifer forests and meadows in the northwestern United States. The golden midsummer blossoms are used in homeopathic preparations.

Arnica is classified as an "at-risk" species by the organization United Plant Savers, and wild populations of

Arnica montana are in decline around the world. While *Arnica montana* is considered the official therapeutic variety, there are several species of medicinal arnica found in North America, some used by regional herbalists. With the future of this important herb in mind, wild arnica should not be harvested. When possible, native arnica species can be cultivated in gardens.

THERAPEUTIC USES

Even though it is seriously endangered in the wild, arnica's reputation in the global natural product industry is growing rapidly. Consumers are advised to opt for remedies prepared from cultivated plants. Often the most potent herbs can be

problematic if misused, and arnica is no exception. Safe use of arnica demands caution and conservation. The unassuming yellow flower poses a serious risk to the uninformed user.

Homeopathic arnica preparations are diluted to the point that they are safe for internal consumption, though non-homeopathic arnica taken internally can cause serious physiological reactions. Arnica is high in plant metabolites called sesquiterpene lactones, especially helenalin, which is topically an anti-inflammatory but quite a toxic irritant when consumed. Among the dire side effects of overdoing arnica internally are a burning throat, nausea, vomiting, spasms, difficulty with respiration, and ulceration of the digestive tract. There is no known antidote to its poisonous potential, and toxicity resulting in fatality has occurred.

Arnica used externally can also be problematic. Beginning herbalists in mountainous areas might craft infused oils, salves, or lotions from arnica flowers but be unaware that these preparations are not to be used on broken skin. For these reasons, arnica should only be handled and used by trained practitioners and experienced herbalists who are aware of the nuances of responsible wildcrafting, medicine-making best practices, and dosing considerations.

Products labeled as homeopathic arnica are available for self-treatment, however, and generally safe when used as directed. These products are popular for those in recovery from accidents or pulled or strained muscles, carpal tunnel, whiplash, or other cases of injury, aches, and pains.

Homeopathic remedies based on arnica flowers are particularly specific to trauma care involving bruises, sore muscles, sprains, and joint tenderness. Topical muscle creams commonly combine homeopathic arnica with a mentholated icy-hot base for the added benefit of enhanced circulation to tackle chronic inflammation such as rheumatism or arthritis. Homeopathic arnica is also applied

to varicose veins; it may relieve the sensation of heavy legs and diminish edema.

Arnica flowers

Homeopathic Remedies

Distinct from herbalism (wherein plant-based preparations are taken in perceptible dosages), homeopathy is a healing modality based on natural materials diluted so that the original therapeutic substance is essentially imperceptible—a practice that originated in Germany in the 1700s, based on the concepts that “like cures like” and that the antidote is in the poison. Homeopaths believe that minute dosages of herbs and minerals elicit effects from the body that address symptoms normally incurred from the original substances. Can a homeopathic remedy of poison ivy prevent rashes caused by the same plant? Scientists may scratch their heads, but many users attest to the benefits of this therapy.

..... 36
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{ Calendula }

Genus and Species: Calendula officinalis
Family: Asteraceae

A vivid marigold to enhance health and beauty inside and out

Cultivated calendula beams brightly in the herbalist's garden, boasting radiant golden flowers that are as beautiful as they are beneficial. Studded with yellow-to-orange blooming discs of petals mirroring rays of sunshine, this pot marigold is a classic aster. Calendula contains the same word origin as "calendar," symbolically referencing the fact that in its native European homeland, it blooms during most months of the calendar year.

Prolific in both medicinal and ornamental beds, calendula has a potency stemming from its sticky medicinal resins, which give the flower a tacky feel when handled. Uncomplicated to grow from seed and thriving in many climates, calendula can reseed itself for years to come. Harvest is simple: Just pop off the flowerhead.

THERAPEUTIC USES

Calendula lends itself to various preparations, including compresses, poultices, salves, lotions, creams, and tinctures. This herb’s sunny blooms perhaps most easily yield their healing vibrance when made into an infused oil. This basic oil preparation is invaluable on its own or as an ingredient base for a range of topical products from balms to bath bombs. Calendula lotion is an all-purpose moisturizer, both soothing dry skin and reducing redness and inflammation. Calendula face cream is wondrous at maintaining healthy skin and restoring radiance to a tired

complexion. This topical panacea is high in antioxidant flavonoids known to stimulate collagen and connective tissue, while preventing free radical damage associated with aging.

Topical calendula is useful during pregnancy, and it is gentle enough for all ages and stages, including newborns. A belly cream made from calendula helps sustain healthy elasticity and minimize stretch marks. A sitz bath infused with calendula tends to postpartum perineal tears, and a poultice of the flower expedites the healing of a C-section incision. Calendula oil is also a balm for nursing nipples that may be cracked and painful. It doubles as a calming ointment for a baby's delicate bottom, and many natural diaper rash products are crafted from its blossoms.

This darling of the herbal world is also antifungal. Its utility extends to candida, thrush, ringworm, athlete's foot, and nail fungus. In these cases, calendula can be dried and ground to a fine powder with lavender and bentonite clay for a skin dusting that keeps an area moisture free yet medicated. A tincture of calendula is used in a mist with rosewater or witch hazel to freshen and rejuvenate irritated skin.

As a first aid remedy, calendula is an ideal antimicrobial vulnerary, or wound healer. It hastens recovery from burns, abrasions, and damaged skin by promoting epithelialization, or tissue repair. Calendula salve can treat diabetic ulcers, bed sores, and surfacing lesions of varicose veins. Surgeons and naturopathic physicians alike respect calendula as a postsurgical remedy for its therapeutic effect on incisions and scars. Versatile calendula is used as an eyewash for conjunctivitis, a mouthwash for canker sores, and a neti pot wash for sinus infections.

Calendula is as effective when used as an internal vulnerary as it is on the surface. The flowers are commonly included in formulas for leaky gut syndrome and are used to address damage to the mucus membranes. Not only is

calendula an impressive anti-inflammatory; it is also a lymph-stimulating herb for those recovering from minor infections.

Freshly picked calendula flowers

Cheeky Tush Powder

A homemade calendula powder is gentle enough for a baby’s bottom and yet practical and potent enough to enhance body hygiene for adults. A dusting can absorb sweat, prevent chafing, and keep intimate areas fresh. Calendula may help nip fungal rashes in the bud while lavender can soothe and cool raw, inflamed skin. To make an herbal body powder, combine equal parts arrowroot, bentonite clay, and finely powdered dried herbs (calendula and lavender are classics). Simply toss a few dried calendula heads and lavender buds in a blender until they are smoothly powdered. Use a tea strainer to sort out any rough bits. Put the ingredients in a shaker or jar to mix before powdering away.

{ Chamomile }

Genus and Species: Matricaria chamomilla
Family: Asteraceae

A classic restorer of order and rhythm

The word “chamomile” translates from the Greek to “little ground apple,” an appropriate tribute to this frilly floral star with its miniature daisy-like appeal. Western Europe and Northern Africa are the original backdrop for wild chamomile, with cameos in Asia. The herb first received acclaim in the Ebers Papyrus of ancient Egypt, in which it was dedicated to the gods.

A well-known herb for curing children’s maladies, chamomile is the stuff of fairy tales. “One table-spoonful to be taken at bed-time,” was the wisdom imparted by Peter Rabbit’s mother. It’s safe enough for most little bunnies (though a few may get itchy, as there is a slight chance of allergic reactions, as with any aster-family plants). The medicinal aspects of chamomile are encyclopedic. It is an engaging and diverse herb steeping its consumer with

vulnerary, nervine, aromatic, antispasmodic, digestive, anti-inflammatory, sedative, anti-ulcer, carminative (tummy calming), and anti-itch action.

THERAPEUTIC USES

Chamomile presents a sought-after trinity of phytochemicals that highlight its nervine, anti-inflammatory, and vulnerary properties: In other words, it has the remarkable ability to simultaneously quiet, cool, and repair. The nervine, or nerve-calming, aspect takes the edge off irate nerve endings when they signal itches and ouches. The anti-inflammatory

capability of chamomile relieves pressure from tissue that may be pressing on nerve endings and causing them to react. It also obstructs the damaging and relentless cycle of flare-ups associated with chronic inflammation. And, as a vulnerary wound-healer, chamomile will likely fix any structural harm endured from inflammatory injury to the body.

Applied topically, chamomile delivers this same therapeutic trifecta to diminish the symptoms of red, itchy skin associated with conditions such as eczema, seborrheic dermatitis, psoriasis, and rosacea. In a pinch, a wet chamomile teabag can be used as a compress and directly applied to a sore spot or rash. Simply dunk the tea bag in warm water for a few minutes to activate its potential and be rewarded by convenient medicine at your fingertips.

Keep a jar of chamomile salve within easy reach and apply when a mosquito bite surfaces; minutes later, the bothersome irritation is forgotten as chamomile flexes its anti-itch (antipruritic) action. Beyond the surface, a topical chamomile-sesame oil preparation is used in Persian medicine for pain from migraines, carpal tunnel syndrome, and osteoarthritis.

The effects of chamomile penetrate more than skin deep. Taken internally, chamomile may catalyze healing along the digestive tract, enhancing reparation of the mucus membranes while calming the nervous tension that can deplete digestive health. In terms of phytoactivity, chamomile can reduce gut tension, cool and calm, and speed the mending of torn tissues.

Clearly the modest cup of chamomile tea is legendary for good reason. As a strongly scented aromatic herb, it is a reliable carminative to alleviate bloating and gassiness during or after a meal. As a digestive bitter, it facilitates the digestion and absorption process. And as a revered antispasmodic, chamomile the multitasker alleviates symptoms of irritable bowel syndrome, menstrual cramps,

and other smooth muscle spasms. The *Matricaria* genus indicates that which pertains to the womb, alluding to this use of chamomile during menstruation.

Chamomile flowers make the well-known tea.

Chamomile Ice Cubes

Frozen botanical infusions coolly combine ice and anti-inflammatory herbs to make a convenient form of grab-and-go medicine. A simple ice cube of chamomile tea can freshen up a dull morning complexion while remediating swollen eyes and skin breakouts. A soft cloth soaked in chamomile tea and put in the freezer provides instant relief to gnaw on for teething infants or fussy pets. Herbal ice cubes made of dainty floral sprigs frozen within tea can be a fun and aesthetically pleasing way to chill a fancy cocktail, flavor a cool glass of water, or cool a steamy beverage.

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{ Comfrey }

Genus and Species: Symphytum officinale
Family: Boraginaceae

An ancient aid for broken bones

Comfrey has long been a treasured medicinal in its native homeland ranging from Europe to Western Siberia and northwest Turkey. Evidence of its cultivation and therapeutic use stretches as far back as 400 B.C.E. European colonists brought it with them to plant in their New World medicinal gardens. Lush and generously spreading, comfrey has since naturalized around the world in habitats with rich soil and a mix of sun and shade. The alternating structure and abrasive texture of its leaves are common features of the Boraginaceae family, as are the dangling clusters of bluish-purple flowers, which unfurl like fiddleheads as they mature.

Comfrey heals the natural world around it just as it helps humans. A strong brew of its leaves, rich in nitrogen content, can be added to the compost pile as an accelerator to encourage microbial decomposition. Comfrey leaves can also be mulched and placed directly into the garden to

enrich the soil. A poultice of the herb can even be applied to damaged tree bark to facilitate regrowth.

The Latin origin of the word “comfrey,” *con firma,* means “with strength”; the genus name, *Symphytum,* comes from the Greek *sympho,* meaning “grow together”; and a common name for the plant is “knitbone.” All these names indicate how widely respected this remedy has been for addressing serious injury.

THERAPEUTIC USES

The Western herbalist’s materia medica elevates comfrey as the ultimate topical herb because of its effectiveness in addressing an assortment of injuries, breaks, and wounds.

Comfrey fills an important medicinal niche with its deserved reputation for accelerating the mending of sprains, torn ligaments, and broken bones.

The herb contains the compound allantoin, shown to expedite healing by increasing the rate of cell proliferation and promoting healthy tissue regrowth. The fact that allantoin is best extracted in water lends credence to the traditional application of a wet comfrey poultice to areas of the body affected by trauma. A slurry of water and fresh, slippery comfrey root on a piece of cloth or gauze is most effective when directly placed onto an afflicted area. This poultice can be held in place with a bandage or wrap, which should remain in place for several hours at a time and be refreshed with new plant material after every use.

The topical remedy is a rapid vulnerary and potent anti-inflammatory, so it can heal already closed wounds and relieve pain, swelling, and bruising overnight (use comfrey sparingly or not at all on open wounds, as it can close a wound so rapidly that it leaves infection beneath). Comfrey is also rich in soothing mucilage. Upon contact, a compress of either root or leaf cools and takes the sting out of irritated wounds. Rich green salves and oils made from comfrey are easily kept on hand for elastic rejuvenation and nutritive smoothing of dry, fragile, or rough skin.

Fresh comfrey leaves can be harvested and kept in the freezer for use any time of year, perhaps for unexpected toe stubs, joint traumas, and other impacts and accidents. A strong comfrey tea or infusion serves as a desirable soak for injured fingers or toes as well as sprained wrists or ankles. Note that if a fracture is suspected, it is best to be sure that the bones are properly aligned by a trained physician before attempting to “knit” them back together with comfrey’s aid.

Lovely comfrey flowers, unfolding as they bloom

Comfrey the (Short-Term) Comforter

While the historical precedence of medicinal comfrey does include internal use for wound healing within the gut and bronchial tissues, a consensus is forming that comfrey is best avoided internally based on its content of pyrrolizidine alkaloids (PAs), which are toxic to the liver. Clinically trained herbalists tend to recommend topical comfrey be used for a duration of no more than 10 days and reserved for acute issues and unbroken skin only. Rest assured that there are other safe options for herbal vulneraries that are appropriate for internal or open wounds, such as plantain, calendula, and gotu kola.

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{ Dragon’s Blood Croton }

Genus and Species: Croton lechleri
Family: Euphorbiaceae

A tree with scarlet sap to seal and heal

When slashed, the Amazonian tree popularly called dragon’s blood weeps viscous scarlet sap, for which it gets that common name. The sap is actually a latex exuded from the cut trunk. Not to be confused with other trees around the world also called dragon’s blood, this understory jungle variety has a slim trunk with heart-shaped leaves and long, greenish-white stalks holding clusters of small flowers. The sticky ooze that flows when the tree is damaged serves an important purpose in sealing its own arboreal wound: The phytochemically rich serum aids the wood by preventing infection and pest infestation—and it has healing powers that can benefit humans as well.

The prized medicinal sap of this unique tree is cherished by Indigenous communities in Colombia, Peru, Ecuador, and

other South and Central American countries. Generations of Amazonian peoples wise in the ways of botanical medicine have lived in harmony with dragon's blood, tapping it as needed for its healing syrup without damaging the tree. In these communities, the sheer number of slash scars commonly present on the tree trunks provides evidence of this use.

In these areas, Western development now poses a risk to dragon's blood trees. It is common knowledge that if the tree is felled, more of the sap can be extracted from it, making it an easy target for unsustainable commerce. This makes employment of responsible forest management especially urgent, to ensure the abundance of this precious resource for generations to come. Fortunately, many efforts are under way to plant more trees as they are harvested, a rewarding task considering the vigorous growth habit of the sapling. In fact, *sangre de grado* ("blood of the dragon," as it is known in some South American countries) makes an ideal reforestation species capable of pioneering the land and aerating the soil.

Ethical sourcing of dragon’s blood is important. Not only is the tree a valuable medicine, but the sap harvest also provides an income for local farmers and their communities. Conscious consumers will support local efforts toward sustainability when sourcing their dragon’s blood.

THERAPEUTIC USES

Thick and humid Amazonian air surrounds an ecosystem diverse in microscopic organisms such as parasites, fungi, and microbes. It is no wonder the potent antifungal, antibacterial, and antiparasitic sap of dragon’s blood is so highly regarded for the common maladies of this region.

When applied to the skin, the thick, sticky, and waterproof serum acts like a liquid bandage to seal open wounds, staunch blood flow, and prevent the intrusion of

microbes. Daubed on clean and thoroughly disinfected broken wounds, the red lacquer not only fastens the skin together but also expedites the formation of a dry, crust-like scab. A brushing of the remedy is topically applied to resolve fungal rashes, viral sores, and other infections. *Parteras* (midwives) of the tree's native region use the "blood" as a vaginal antiseptic wash, while also offering small doses of it internally to prevent postpartum bleeding.

The striking liquid derives its sanguine color from significant amounts of anthocyanins, which are known for maintaining healthy collagen and elastin in the skin. Recently, dragon's blood has found its way into cosmetic products to promote a firm and healthy dermis. Drops of the highly astringent remedy (taken in water) have also gained a reputation in the treatment of infectious diarrhea, an Indigenous use that led to an ethnobotanically derived drug that is now FDA-approved to treat diarrhea in HIV patients.

Blood-red sap drips from slashes in the trunk of a dragon's blood croton tree.

Dragon’s Blood Discovery

A remarkable resin, dragon’s blood has made a name for itself in both the pharmaceutical and herbal worlds. A drug derived from dragon’s blood, Crofelemer, is one of only two FDA-approved, botanically derived medicines that represents a synergistic cocktail of plant compounds, rather than an isolated chemical. Crofelemer is the sole medication that can be taken for hard-to-treat diarrhea along with antiretroviral HIV drugs without being contraindicated. Like the dragon’s blood that catalyzed its creation, it is highly effective at working its astringent magic and reducing bowel urgency. Select drug manufacturers have created clear ethical harvesting guidelines to ensure continued stands of *sangre de grado* for future generations.

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{ Echinacea }

Genus and Species: Echinacea purpurea
Family: Asteraceae

A distinctive tingle indicates vast medicinal activity

The purple coneflower of the American meadow is one of the most recognizable medicinal plants, brightening the bottles of immune-supportive formulas all over the world. Its bristly rounded center is encircled by relaxed petals in deep-hued rays. The Greek word *ekhinos,* or “hedgehog,” characterizes the genus name, based on its spiky floral conehead. Like sunflower, echinacea is in the Asteraceae family.

Although echinacea is among the most studied medicinal plants in the world, it grows wild only in North America. Concerns loom over its overharvesting and the sustainability of its native populations, despite it being easy to cultivate and an ideal addition to native pollinator gardens. The original stewards of wild echinacea are the Indigenous peoples with ancestry in the North American plains and

eastern woodlands. These people and this plant share a history that demands reverence. Echinacea is listed as “at-risk” by United Plant Savers—another indication that it is critical to respect and protect the wild populations of this important herb. (See chapter 7 for more on United Plant Savers.)

THERAPEUTIC USES

A nibble of fresh echinacea blossom or root disperses a distinctive zing to the tongue, followed by slight numbness and salivation. As with spilanthes, this effect is due to the

presence of alkamides. Similar to that “electric daisy,” echinacea is also useful in a variety of dental issues.

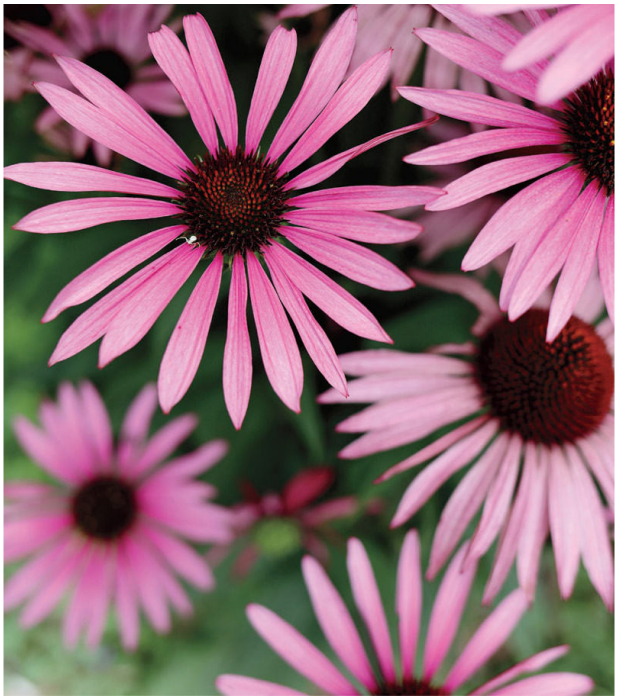
One primary benefit of echinacea is its topical application in cases when inflammation is fresh and acute, as in insect bites or bee and wasp stings. The key to dramatically inhibiting an inflammatory response is immediate and consistent application of echinacea coneflower or root via a cotton ball soaked in tincture, or even a fresh poultice. For these instances, echinacea tincture is a mainstay of the herbal first aid kit. Folk herbalists also keep echinacea on hand in case of snake bites, as an interim aid while awaiting medical intervention.

On the skin, an echinacea tincture, infusion, or fresh poultice can lessen the intensity of outbreaks of herpes lesions, warts, boils, ulcers, and pimples. In the bath, an infused vinegar of echinacea blossom can be used as a hair rinse to soothe an itchy, dry scalp. Echinacea lotion takes the edge off eczema, psoriasis, and poison ivy flares. An echinacea lotion or cream can improve skin hydration and repair the outer layers of the dermis. Echinacea is rightfully described as a vulnerary, accelerating wound healing, and as an antipruritic, minimizing itching. This herb can be applied to minor kitchen burns to prevent blistering and alleviate pain.

Used internally at the first sign of an infection, echinacea is a darling of the herbalist’s apothecary. Much research focuses on echinacea’s impact on the common cold and flu, yet echinacea can help offset a wide range of immune activations caused by bacteria, viruses, and fungi. Well-formulated throat sprays including echinacea may ward off the progression of a sore throat. Generous dosing with echinacea tincture is in order if a candida infection threatens.

Folk usage favors fresh mashed roots, ground cones or flowerheads, and the juice of the fresh root and leaves, while modern preparations focus on echinacea alkamides and

therefore favor root tinctures. Echinacea also contains water-loving polysaccharides, and a boiled decoction of the whole plant is nourishing to the immune system if consumed over time.



Echinacea flowers, seen from above

Echinacea Herbal Burn Mist

A spritzer bottle filled with soothing herbs can be kept in the fridge for cooling first aid relief. To make the mist, fill a one-ounce spray bottle with equal parts clear aloe juice and echinacea tincture, adding 5 to 10 drops of lavender essential oil. Mist onto minor burns to prevent blistering and alleviate pain. Aloe is known for its ability to heal burns, and echinacea has a long history of use in reducing the associated pain. Completing the healing trio, lavender has gentle antimicrobial activity that can help prevent infection.

{ Gotu Kola }

Genus and Species: Centella asiatica
Family: Apiaceae

Reparative inside and out for a long and healthy life

A juicy tender stem balances the circular leaf of gotu kola, reminiscent of a spinal cord supporting a brain. Only a few inches tall, diminutive gotu kola carpets the tropical and subtropical regions of Asia, Africa, New Zealand, India, and the Western Pacific as a creeping, bright green ground cover. It is happiest with wet feet in boggy ground, rice paddies, ditches, and marshlands. Suited to moist and shady tropical areas, this Asiatic pennywort has settled comfortably onto many of the Pacific Islands, including Hawaii, where it is considered an invasive.

In more temperate regions, herbalists experiment with cultivating it as a greenhouse cover crop in hopes of a fresh supply of this brilliant brain food. In many Asian countries, the leaves and stems of this herb are eaten raw or prepared as a cooked green to accompany rice dishes, coconut

curries, and fresh fish. The flavor of gotu kola is alive with grassy overtones and a cooling and nutritive energetic.

THERAPEUTIC USES

Sri Lanka’s stories of elephants, known for their long lives, grazing on tender gotu kola inspired humans to munch on the leaves in hopes of a similar longevity. In China, some refer to gotu kola as the “miracle elixir of life.” It is known in the Ayurvedic tradition of India as *“brahmi,”* a name referencing its effective healing agency in tissue repair both topically and internally. Not only does its reparative repertoire include the skin, but it also includes a

demonstrated affinity for the mucus membranes of the digestive tract, the lining of the blood vessels, and the brain and nervous tissue.

Brahmi has been used for generations in Ayurveda as a topical herb to accelerate healing of burns, scrapes, and wounds, and to minimize inflammatory conditions such as stretch marks, eczema, psoriasis, and scleroderma. Scientific research tells of its ability to promote collagen synthesis and epithelialization, or resurfacing of a wound from deep below, while minimizing scarring, especially that which is thick and elevated.

In Ayurveda, gotu kola is regarded as a panacea for longevity and an herb known for *medhya rasayana,* or revitalizing mental faculties. In the natural product industry, it is referred to as a nootropic, offering improvements in executive function, memory, and cognition. It can be nourishing for the brain and nervous system, where it seems to revitalize damaged nerve tissue, enhance nerve communication, and improve blood flow through tiny capillaries. In this regard, gotu kola has a specific affinity for vascular health and is especially suitable as a blood vessel tonic, where it can strengthen the lining of the veins and minimize localized inflammation, reducing the capillary permeability associated with edema and varicose veins.

Herbalists fortunate enough to have access to fresh material love juicing the crisp fresh leaves and stems of gotu kola to make an herbal succus. This juice can be taken as a shot, blended with blueberry juice for pure cognitive and cardiovascular refreshment, or crafted into a mint lemonade for digestive support. Ayurvedic practitioners often prescribe brahmi powder as part of a custom formula, and it can be added to morning smoothies for a healthy start to a high-functioning day.

The tender leaves of gotu kola

Brahmi: Greatest of the Great

In Ayurvedic medicine, brahmi is considered wondrous for sharpening the consciousness and keeping the mind calm and crystal clear while promoting wisdom and intellect. The designation of brahmi upon the herb *Centella asiatica* bestows an honor in the name of the deity Brahma, the supreme intellect of the universe, the greatest of the great, and the symbol of resurrected creativity. Similar reverence is given to another Ayurvedic herb, *Bacopa monnieri,* which is also noted for its exalted benefit to the mind. Both herbs are sold under the common moniker of brahmi, so an educated consumer will look to botanical nomenclature to confirm the true herbal identity.

42

{ Horse Chestnut }

Genus and Species: Aesculus hippocastanum
Family: Sapindaceae

A smooth seed cloaked in spines

Deciduous horse chestnut trees, planted for their stately silhouette and reliable shade canopy of palmate leaf fans, are a common sight on a small town's main square or other traditional gathering spots. A perfect climbing tree, it is cultivated around the world, with the epicenter of its lineage in the Balkan Peninsula and southeastern Europe. Its showy cream-colored flowers cascade in vertical chandeliers splattered with yellow hues, colored so as to be nectar guides for pollinators. Upon pollination, the aging blossoms turn crimson, which botanists assume to be a sign for pollinators to move on.

Spiny, green, leathery spheres later appear, each containing one to three smooth and shiny buckeye-like seeds (similar in appearance but not to be confused with their buckeye relatives), colloquially referred to as

“conkers.” Conkers also refers to a game played with the nuts, a traditional pastime for children in Great Britain and Ireland. While the nuts look edible, they have an unfortunate rancid, soapy flavor that would instigate an unsavory digestive experience.

THERAPEUTIC USES

The horse chestnut seed has traditionally been used topically as a wet poultice to treat conditions such as neuralgia, rheumatism, and venous congestion associated with dull achy pain, fullness, heaviness, and engorgement. Swollen and sore legs, for example, improve with routine

compresses of a decoction of the ground seed. Another common use is application of the seed for rectal complaints such as hemorrhoids and nonhealing ulcers due to stagnant blood flow. A poultice of ground horse chestnut can be made by mixing the seeds with warm water to create a moist putty-like dressing. Topical remedies, marketed for minimizing the appearance of spider veins, are also readily available in commerce as gels, salves, and lotions.

Crafty herbalists might design a lotion of horse chestnut seed with violet and witch hazel for alleviating swollen varicose veins. A lotion made of the seed-infused oil can also be used cosmetically, as a facial toner and to reduce puffy morning skin. Horse chestnut seed–infused oil can support the lymphatic system, especially in clearing out stagnant edema or minimizing the appearance of cellulite. In conditions such as carpal tunnel, where edema is an aggravating factor, the remedy can help offset inflammation. For acute sports-related and impact injuries with swelling and bruising, a horse chestnut salve or gel may hasten recovery. Ideally, this topical support will be reinforced from the inside out by simultaneously using horse chestnut internally.

Conveniently encapsulated standardized extracts of horse chestnut represent one of the highest-selling herbal extracts in the natural product industry. While a tincture can also be used internally, the extract is easier to ingest and gentler on digestion, especially when taken with food. The saponin fraction of horse chestnut is referred to as escin. This soapy organic chemical isolate has been extensively researched in various clinical trials, which have supported its efficacy in treating varicose veins, edema, and bruising and swelling from injuries. Studies note that these horse chestnut saponins reduce blood vessel fragility and capillary permeability, making veins stronger and increasing contractual tone for better venous return of blood flow.

Inside the spiny husk, horse chestnut seeds gleam auburn red.

Standardized Extracts

There is a potent synergy to whole, nonstandardized plant preparations—medicinals that have not been manipulated in a lab to contain a certain amount of specific constituents. Not only is their use and ease of preparation supported by generations of tradition and folk wisdom, but they are also considered holistic in their offering of a diverse range of phytochemicals that the body can use for healing. But, in some cases, specific isolated plant constituents are validated by research to perform effectively and consistently for certain issues. When a manufacturer produces a standardized extract, it is created by focusing on one chemical or group of compounds present in the herb. Horse chestnut seed standardized extract is focused on escin, its medicinal saponin, which is backed by an impressive body of science.

{ Plantain }

Genus and Species: Plantago major/lanceolata
Family: Plantaginaceae

A versatile go-to herb for everyday skin conditions

The herb plantain (unrelated to the banana-like fruit of the same name) boasts a presence on all inhabited continents and may even be growing as a weed in your backyard. A resilient lover of disturbed soil sites, it's found popping up in sidewalk cracks, along trail edges, in open fields, and on sunny creek sides. Plantain spreads its horizontal greenery flat to the ground, reminiscent of its genus name *Plantago,* derived from the Latin word for "sole of the foot" and a reference to its ground-hugging nature. Plantain, which arrived in North America via Europe, was also termed "white man's foot," indicating that anywhere a European walked through the continent, plantain followed.

Broad-leaf plantain *(Plantago major)* and narrow-leaf, or lance-leaf, plantain *(Plantago lanceolata)* may be used

interchangeably. The basal rosette of each is made up of deep green, short-stemmed, ribbed oval leaves. Torn open, a leaf reveals a stringy white fiber inside its veins. In the summer, plantain sends up a narrow stalk that bears tufts of inconspicuous white flowers. Later, these blossoms give way to tiny seeds called psyllium that turn from green to brown as they age. This fibrous husk is the same one known to bulk up the diet with fiber. A single shoot of common plantain can produce thousands of seeds that remain viable for decades.

THERAPEUTIC USES

Plantain enjoys a reputation as the original “green bandage” due to its first aid application for minor skin irritations, cuts, and scrapes. Touting the complementary qualities of tightening astringency and soothing mucilage, plantain seals abrasions while calming and cooling inflammation such as hemorrhoids and rashes. Common plantain is famous in the form of a spit poultice, made by chewing up freshly picked leaves—they’re entirely edible—and applying this green goo to an afflicted area. This topical application is very suitable as a first aid treatment in the field for all kinds of skin irritations, from bug bites to blisters.

Both common species of plantain contain allantoin, a vulnerary, or compound that stimulates tissue regeneration and wound healing. Allantoin is best delivered in water, so a wet preparation of plantain aids its ability to heal broken tissues. A plantain poultice also has a potent absorbent quality, good for removing splinters, bee stingers, venomous toxins, glass shards, and pimples, and drawing out mild infections.

A standard ingredient in herbal salves, plantain nourishes, moisturizes, repairs, and calms the skin. Its gentleness lends itself to use for all ages and stages, even on the most delicate parts of the body. Possessing mild antibacterial properties, plantain leaves and roots may be prepared as a cool infusion or tincture and consumed for sore throats and upper respiratory infections. The fresh leaf can be infused into distilled witch hazel to make a skin spritzer for inflamed conditions.

The mucilaginous seeds of plantain erupt into a gelatinous mass when moistened. This seed gel can be applied topically to allay irritations from fungal infections to diaper rash. The flower’s heads and seeds, sold as psyllium husk, can also be added to smoothies and cereals for a lubricating, fiber-rich bulk laxative. Kitchen herbalists add edible fresh plantain leaves to pesto, infused vinegars, and other dishes for their nutritive qualities. The herb can also

be dried for future use, as long as it is moistened before it is applied for wound healing.

Narrow-leaf plantain leaves (center) among other garden weeds

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Plantain Spit Poultice

Self-explanatory, convenient, and effective, plantain spit poultices are grab-and-go herbal medicine. Simply look for two or three clean green plantain leaves and pluck these off at the stem. Chew them for 5 to 10 seconds until a soft green paste is produced. Roll this mash into a little wad, remove, and apply directly onto an affected area. This spit poultice may be kept in place with a bandage or, better yet, secured with the long narrow stem of an intact plantain leaf, which makes an ideal makeshift Band-Aid once tied off around a finger or toe.

44

{ Self-Heal }

Genus and Species: Prunella vulgaris
Family: Lamiaceae

An unassuming lawn weed to heal the self, wounds and all

The common name “self-heal” points clearly to this herb’s long legacy of curative power. This common lawn weed grows in open fields and pastures, on roadsides and creek sides, and along forest edges. Its diminutive two-lipped flowers encompass a range of purple hues as they cluster together on a club-shaped spike. Each flower has a top hooded lip and a bottom white-streaked rim composed of three lobes, the middle of which is fringed. During the peak of summer, scattered blossoms intermittently bloom along the spike, which is situated on a pair of opposite, stalkless leaves.

Self-heal is typically harvested anytime the plant is flowering. The whole aerial plant is used to make various remedies that have become integral to herbal practices all over the world. Some herbalists prefer to gather the flower

tops by pinching the stalk right below the pair of leaves at the flower base. Many herbalists like to harvest self-heal with all of its medicinal leaves, by cutting the stem closer to the ground. Self-heal can be hung to dry in bundles, laid out to dry on screens, or used fresh to prepare medicine.

THERAPEUTIC USES

Rich in tissue-binding tannins, the whole plant offers an astringency that tightens the weave of raw membranes and

heals wounds. This quality of self-heal is useful to slow bleeding from small cuts and in other first aid scenarios. A topical poultice, salve, or sitz bath of self-heal can offer relief for varicose veins, hemorrhoids, and topical ulcers. Its astringency, coupled with self-heal's antimicrobial nature, makes it an exemplary herb for any skin abrasions, earning it its traditional moniker of the "carpenter's herb."

The winning combination of tightening and infection-fighting makes self-heal ideal in a compress or infusion wash to clear up eye discharge and defend against microbes. A salve made from self-heal is a popular remedy among herbalists for insect bites and other topical afflictions.

Self-heal, used in Traditional Chinese Medicine for more than two centuries, is considered in that tradition to be an "herb that drains fire." Traditional folk wisdom calls for a self-heal succus, or juice, in the treatment of sores, ulcers, and blisters. The scientific discovery of its antiviral activity has since confirmed its use against herpes outbreaks.

Taken internally as a tincture or infusion, self-heal offers gentle alleviation of diarrhea. Detoxifying and cooling through its diuretic activity, self-heal is supportive of those with metal toxicity. The infusion is consumed for its cooling refreshment and ability to move stagnant lymphatic tissue and swollen lymph nodes as well as for goiters and various conditions of the thyroid.

As the doctrine of signatures tradition suggests, self-heal's uses match its physical form. Beyond its floral lips, each bloom resembles a throat with swollen glands. Unsurprisingly, self-heal is called upon historically as a gargle for sore throats and as a mouth rinse for canker sores and gum inflammation.

Infused self-heal honey is not only an herbal delicacy but also a common folk remedy for oral irritations. Self-heal is entirely edible, and the blossoms can be tossed in salads or ground up for herbal pesto. An infused vinegar of self-heal can be taken daily as a nutritive mineral tonic.

Close up, self-heal flowers reveal their relation to other mints.

Self-Heal Salve

To craft a salve from this useful weed, first prepare a self-heal infused oil (see directions for Saint John’s wort oil on p. 101), warming it in a double boiler over very low heat. Slowly stir in shaved beeswax, using one to two ounces of beeswax per cup of oil. Stir until beeswax is melted. To test the concoction’s firmness, dip a spoon into the warm salve blend and place the salve-covered spoon in the freezer until cool. The cooled salve on the spoon should give an indication of how firm the end product will be. Once satisfied with firmness, quickly but carefully pour the oil-beeswax mixture into individual containers and allow the salve to set at room temperature before lidding. Label and use as needed.

HERBAL HERITAGE

Herbs in the Ayurvedic Tradition

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Rooted in the medicinal traditions of India and encompassing thousands of years of wisdom, Ayurveda is a lifestyle-oriented healing system that includes a range of modalities such as herbalism, diet, massage, meditation, and yoga. Its name says it all: *Ayur* means life, and *veda* represents knowledge. Ayurveda favors foods, herbs, and self-care routines that are individually formulated to provide energetic balance to body, mind, and spirit.

In Ayurveda, the elements of space, air, fire, earth, and water are expressed in varying amounts through an individual's temperament and mood, as well as through the manifestation of their physical body. Ayurveda categorizes people into three energetic types, or *doshas*. A *vata* dosha is characterized by space and ether, or air. Creative and mentally inspired, and physically prone to cold and dry, vata is supported by grounding and warmth. A *pitta* dosha is a combination of fire and water. Fierce and ambitious by nature and prone to inflammatory flares and acidity in the body, pitta benefits from cool and calm. A *kapha* dosha is characterized by earth and water. Soft and nurturing within, but prone to congestion and stagnation when imbalanced, kapha finds equilibrium in warm stimulation and movement.

Together vata, pitta, and kapha compose the "tridoshic" model of Ayurveda. While each dosha is present in every person, individuals have a predominant tendency. An

awareness of this innate dosha informs a counterapproach meant to restore balance to the body, such as supporting a brittle vata person with plenty of teas and other liquid nourishment for thirst-quenching. The breadth of the Ayurvedic healing tradition is vast. In this chapter, the discussion is centered around skin care, though the herbal remedies mentioned here include both topical and ingestible preparations.

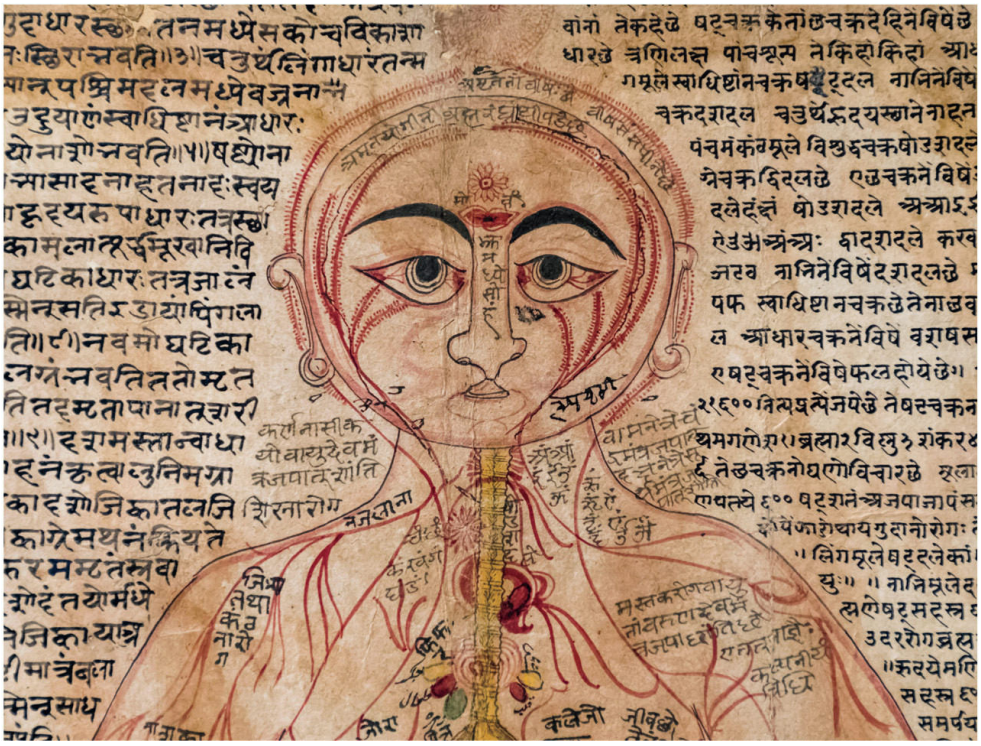
Dried slices of bael fruit, an Ayurvedic treatment for digestive ailments

VATA SKIN CARE: SPACE AND AIR

An imbalance of vata energy tends toward dry and flaky skin with itchy and frustrating agitations. Chronic conditions appear as rough and uneven skin patches that may be exacerbated by sensitivity to cold, wind, and an arid climate. A sunken, depleted pallor with thin skin is typical of a vata complexion that is out of balance.

Hydration and lubrication are key elements of a nourishing rejuvenation routine for vata skin. Warm oatmeal baths or gentle steams may be followed by all-over applications of herbal infused oils. A sesame oil infused with gotu kola, ginger, and ashwagandha is ideal. Vata types

should avoid salts in the bath as they may be too drying. But a chickpea flour mask blended with warm almond oil is nurturing for vata skin. According to Ayurvedic principles, vatas should eat plenty of ghee and regularly drink warm fluids for supple and healthy skin that glows.



Sanskrit instructions describe the human body in this 18th-century anatomical diagram from India.

Fresh turmeric roots encircle a bowl of the powdered herb and a turmeric salve.

PITTA SKIN CARE: FIRE AND WATER

An imbalance of fiery pitta tends toward redness of the skin, frequent flushing, rosacea, and a potential pattern of inflamed acne. Chronic conditions are characterized by inflammatory eruptions, swelling, and skin that is warm to the touch. The pitta skin care routine is one of cooling, quieting, and soothing. Pacifying rituals to help allay the aggravation that leads to flustered skin are important for pitta constitutions. A washcloth soaked in cold chamomile infusion and applied to the skin is a prime example of a pitta self-care habit. Frequent rosewater mists nourish a pitta’s self-esteem while refreshing the skin. For the overheated pitta, products with a base of aloe gel or coconut water are ideal. Pittas can make a mask from these refrigerants

blended with anti-inflammatory turmeric and skin-nourishing gotu kola powder for topical pampering.

Drinking cool infusions of cucumber and fennel tends to an overheated internal core, and adding them to a tepid bath calms tenderness and inflammation. Pitta people are better off avoiding the use of herbal steams and spicy foods. A tension-taming beverage to nourish pitta skin from within can be made by cooking shatavari powder into coconut milk, adding a splash of rose water, and serving on ice.

Roots, seeds, and leaves typical of the Ayurvedic tradition

KAPHA SKIN CARE: EARTH AND WATER

An imbalance of earthy kapha tends to reveal skin that appears greasy and clammy with the potential for clogged pores and whiteheads. Chronic conditions might manifest in weepy rashes that are slow to heal and oozing festering sores from lack of circulation. Many kapha skin issues are

due to underlying circulatory stagnation with an accumulation of toxins and sebum.

Kapha skin benefits the most from a spa regimen of light exfoliation and gentle detoxification. Routine dry brushing, brisk exercise, and deep breathing practices help stimulate lymphatic movement and enhance circulation, supporting radiant skin. Tulsi (holy basil) hydrosol in a skin mist can be uplifting for kapha constitutions. Warm, stimulating baths with cleansing salts, ginger, and mustard seed are robust self-care to enliven dull kapha skin.

The epitome of the nurturer, a kapha type paradoxically benefits from receiving pampering treatments from others. Occasional facials with a detoxifying mask help draw out impurities beneath the surface. Herbal tea made with skin-rejuvenating gotu kola and detoxifying tulsi can be mixed with dry clay and a touch of raw honey to make the perfect face mask. Kapha people should avoid fried foods and oil-based topical products, instead favoring chai spices in tea and recipes to keep the blood diffusive and the skin bright.

Lavender bath salts

Herbs Valued in the
Ayurvedic Tradition

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ASHWAGANDHA
Withania somnifera

GOTU KOLA
Centella asiatica

HOLY BASIL
Ocimum tenuiflorum

SHATAVARI
Asparagus racemosus

TURMERIC
Curcuma longa

. . . . . .

5. Garden Herbalism

CALIFORNIA POPPY
ELECAMPANE
FENNEL
HOLY BASIL
LEMON BALM
LEMONGRASS
ROSEMARY
SKULLCAP
SPILANTHES
STINGING NETTLES
SUNFLOWER

Sunflowers in full bloom

Personal Growth Through Gardening

Most any gardener will admit that gardening is as much about personal growth as it is about botanical bounty. The moment a seed is placed in the ground, a caregiver is born. As green shoots

unfurl and plant personalities emerge, they become teachers. In return for tender care, plants guide a gardener’s reimmersion back to the web of nature, repatterning to the rhythms of the seasons and recalibrating an awareness of the landscape.

Gardeners develop discipline through daily caregiving and exercising patience while awaiting abundance. They build soil. With hands in the dirt, a familiar feeling washes over the gardener’s spirit, a reminder of being part of an ancient lineage. Grounding oneself in the meditative practice of weeding declutters the mind as much as it clears the garden. As the flora fill in, gardeners cultivate intimate relationships, finding allies in the sensory gifts of the plants.

Cultivated herbs present their tenders with rich experiences, from protective accountability in the face of pests to joyful jubilation at full bloom. Herbs that have been lovingly maintained uplift their admirers with the expression of colors, fragrances, and poise. Merely passing through a garden is an invitation to awe. The elation of the towering elecampane above, the refreshment of rosemary permeating the air, and the euphoric trance of holy basil offer the opportunity to soak in the moment.

THE GARDEN VISION

The first seed that any gardener plants holds the vision of the expected harvest. Aspiring to a medicinal garden elicits a lofty ideal of bountiful harvest baskets radiating empowerment, autonomy, self-care, and sustainability. But this achievement requires planning and thoughtful consideration.

This chapter introduces 11 common garden herbs, each chosen for their easy-to-grow nature, useful quality, and aesthetic grace. Every herb may not be appropriate for all

regions. There are a plethora of plants that are perfect for the medicinal garden setting.

A practical first step to planning your garden is to assess the household’s needs and come up with a short list.

Calendula flowers, a garden medicinal easy to grow and gather. Photo courtesy Herbal Academy

Is there a kitchen herbalist in the house? Plan for a fresh assortment of culinary herbs and explore new recipes, such as sweet-scented fennel seed candy. Are there children involved? Grow a sunflower fort while teaching them about Mesoamerican healing traditions. Concerned about summer first aid? Plant some spilanthes seeds and let the electric daisy zap those bee stings away. Caring for an older family member? Start a patch of lemon balm for vibrant cognitive health. Is the home environment fast-paced and hectic? Plant a patch of various nervines and make a relaxing cup of skullcap tea. Whatever the needs of the home, it is best to start simply and first get familiar with a few select herbs and their growing habits.

FORM AND FUNCTION

It is also important to consider the logistics of garden design. If the gardener is the artist, what does the canvas look like? Despite a gardener’s idyllic vision, an expansive yard may not be readily available for tearing up and installing ambitious beds. Even if there is ample yard space, baby steps in the direction of a larger goal may be the way to go.

Consider folding medicinal plants into the established landscaping. A splash of California poppy around the mailbox or echinacea’s pop of color and texture beneath a window utilizes functional space around the homestead. A small patio is an ideal backdrop for a container garden. Ponder a corner pot of lemongrass. A raised garden bed can easily be filled with an assortment of medicinal plants.

The garden artist must also consider the medium as integral to the design. Building soil is an art form that benefits from a rich nutritive compost. Nettles and comfrey are well known for accelerating compost and making a nourishing mulch for garden beds.

Medicinal gardens can be as intricate as a gardener desires. Once the form of a garden is settled, consider adding ornamental accents, water features, or architectural details to create a meditation labyrinth, a fairy garden, or a relaxing tea-time corner with a bistro set.

A springtime sprout

THINK LOCAL

A connection to place is essential for the herbal gardener. When planning plantings and harvests, it is important to examine the bioregion of a location, taking into account factors such as climate and precipitation. Begin with hardiness zone maps, which help indicate which plants can thrive in a given location. Consider growing heritage varieties of plants and saving their seeds to both honor previous generations of land stewards and preserve diversity for the future.

Next, plug into various social networks of a local community. Garden clubs and local extension agencies are wonderful hubs of information and offer resources for local plant and seed swaps. Gardeners can practice awareness and consciousness of the privilege of having access to land and space and help build community by supporting local gardens, inner city foodscapes, and specific BIPOC spaces

for collective medicine growing. Consider, too, donating seeds, plants, and excess harvest to local food banks and herbalists who offer free and sliding-scale services.

CONSIDER NATIVE

Every garden steward has a responsibility to their respective bioregion. It is crucial to become familiar with the invasive plants of your area and avoid propagating those that have the potential to take over the yard next door or, worse yet, encroach upon native plant or animal habitats. Whenever possible, consider planting herbs native to the region. Honor the native bees and pollinators of the region by planting a pollinator garden or establishing a butterfly plot. If the land is composed of forest, wetlands, or meadows, cater to the landscape with woodland natives and prairie plants.

Gardeners think about the legacy of the land beyond the scope of their own generation by ensuring that the ecological health of the region is sound. The organization United Plant Savers is an example of leadership and education about medicinal native plants in need of preservation in North America. By connecting with local native plant societies, gardeners learn about the issues inherent to their community. Most important, think not only in terms of the life and health herbs offer us but also of what we can do for them by establishing native plant sanctuaries.

A flourishing summer garden

{ California Poppy }

Genus and Species: Eschscholzia californica
Family: Papaveraceae

A golden relaxation aid for bedtime and beyond

Vibrant cups of gold amid feathery bluish-green foliage make this flora a breathtaking addition to a medicinal herb garden. As its name hints, California poppy is native to the western United States and Mexico, and it holds the title of state flower of California. Lucky is the herbalist who beholds the sight of California poppy in the wild, where it may carpet miles of landscape, looking like a tangerine sunset.

Indigenous communities have a storied and intimate relationship with this Native American plant, one distinct from how California poppy is used in Western herbalism. One way to honor and uphold this valued poppy is to help protect and conserve its wild populations and source it from conscious cultivators.

In the garden, California poppy is best suited to dry environments with sandy soil and rocky flower beds. Easily started from a scattering of seeds in the fall or early spring as the ground thaws, wispy silver foliage will emerge later in the spring and will set flower buds according to the weather conditions of the locale and the seasons. In many areas, California poppies first bloom in the cool of early summer, rest during the hotter months, and return for a second bloom in the fall.

The flowers follow the patterns of darkness and light in a rhythm known as nyctinasty. When these golden poppies are in blossom, they exhibit waves of movement during the day and night, both diurnal and nocturnal. As daylight breaks, the pointy buds unfurl to form a silky four-petaled orange teacup that drinks in the bright day. As the sun settles in for

the night, the blossom tucks its petals inward, as if giving itself a bedtime hug.

THERAPEUTIC USES

California poppy's medicine energetically invites its consumers to follow nature's diurnal rhythm. Its gentle unwinding embrace may inspire a practice of tucking oneself in at night. Herbalists consider California poppy a nightstand remedy, convenient to reach for at bedtime or midsleep awakenings. Common in sleep formulas, this pacifying herb—typically used in a fresh plant tincture, cup of tea, or capsule—can prove to be a calming sedative and may be helpful for someone experiencing insomnia.

As mild as it is uplifting, California poppy appears to be safe for the whole family. As a folk remedy, it has long been used to encourage tranquility in children and prevent bed-wetting. A counter to the "tired and wired" syndrome, it is often included in herbal supplements that help children wind down as bedtime approaches.

Aside from its bedtime support, this neon poppy is most appreciated for its pain-relieving analgesic and calming antispasmodic qualities. It de-escalates the nervous system and offers its consumer a subtle detachment from dull aches and uncomfortable spasms. Clinical herbalists widely use the tincture for neuralgias, cramps, colic, anxiety, and generalized pain, especially when it interrupts sleep.

California poppy's essence inspires an anchored and serene outlook in someone with frazzled nerves or exhaustion. As this gorgeous flower is attuned to cyclical fluctuations, it is likewise supportive of people who are sensitive to the changing of the seasons. In combination with other mood-optimizing herbs such as lemon balm and nerve-soothers like milky oats, it can be useful in addressing patterns of anxiety and depression. Who wouldn't benefit

from unfurling after a long day with a cup of tea infused with California sunshine in plant form?

Fields of California poppies in Antelope Valley, California

Not Your Grandmother’s Poppy

While many associate the poppy with the infamously bold red opium variety, there are hundreds of other species in the Papaveraceae, or poppy, family, including many well-known medicinal varieties. Researchers consider California poppy—which is not an opiate—to be safe and nonaddictive. Due to its calming nature and usefulness in pain management, California poppy is often considered as part of a holistic opiate withdrawal protocol. But as with many profoundly relaxing herbs, one should exercise caution when combining it with medications or operating a vehicle.

{ Elecampane }

Genus and Species: Inula helenium
Family: Asteraceae

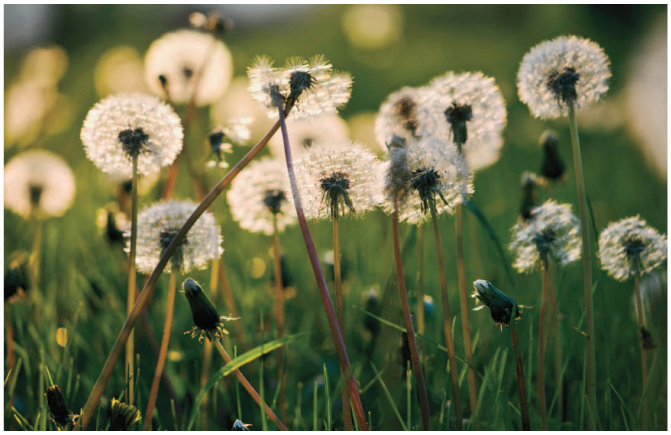
An aromatic antiseptic for the lungs

Patient garden herbalists with a generous growing season and spacious ground may be drawn to cultivate a towering patch of the spectacular medicinal plant elecampane. Easy to start from seed, elecampane evolves from year one as a basal rosette to year two as a colossal architecture of flowering stalks clasped with enormous alternate leaves and decorated with frilly yellow blossoms at the height of summer.

As the sunflower-like blooms morph into seed heads and the plant fades to brown, its energy reverts back into its roots, where deep medicine awaits a fall harvest. The knotty mass of roots and running rhizomes can be dug up for medicine at any point after its second year of life. Pieces of root from the harvest can then be replanted to continue its lineage. Allowed another growing season, the gnarly rhizome will spread modestly and send up new shoots the following year. Elecampane’s aerial parts may be cut back

as winter approaches and the plant is put to bed. The seed heads can be saved to sow the plant anew in spring or to share with fellow gardeners.

Ancient garden lore nicknames the plant “elf’s dock.” The word “dock” refers to a plant with large leaves. Legend has it that elves reside in the stands of elecampane, bringing magic into a garden.



THERAPEUTIC USES

Peeling back the leathery outer layer of the root exposes a pungent, spicy perfume flavored with warmth and accented by hints of bitterness, revealing elecampane’s identity as yet another herb to delight the absinthe maker. Kitchen herbalists who appreciate the plant’s highly aromatic bite also favor recipes for chunks of candied elecampane root. Others opt for a spoonful of elecampane-infused honey for its medicinal vapors, which penetrate deep into the lungs to alleviate wet coughs.

Whether given as a confection or dispensed as syrup, tea, lozenges, or tincture, elecampane is revered most for its drying and heating energetics, which clear stagnant dampness and persistent mucus from the bronchial tract. It is used to open up the respiratory passages in those who are

short of breath or who sense a heavy coldness in their chest, as in bronchitis, pneumonia, or tuberculosis.

As an aromatic bitter, elecampane serves as a digestive aid as well. Just one sip of tea or a few drops of the tincture can stimulate digestive juices and alleviate cramping, bloating, and gassiness. Elecampane can heal ulcers while supporting the restoration of mucosal circulation. A significant percentage of the root is composed of inulin, a nourishing food for beneficial gut bacteria.

Bold doses are often used in protocols for eliminating parasites. Some farmers give elecampane to horses and sheep for respiratory and digestive issues and as a treatment for parasitic conditions—a use that explains one of its old common names, horseheal.

Preparing elecampane root for drying

Inulin in Inula?

The very word “inulin” comes from elecampane’s botanical name, *Inula helenium,* and the plant’s roots store plenty of it. A starchy substance that stores energy in the roots of many plant species, including chicory, dandelion, sunchoke, and burdock, inulin acts like dietary fiber when consumed, increasing the feeling of satiation and slowing blood sugar absorption. A prebiotic, inulin provides beneficial food for gut flora as it passes through the digestive tract and can promote a healthy colony of microbiome organisms.

{ Fennel }

Genus and Species: Foeniculum vulgare
Family: Apiaceae

A palate-cleansing seed to calm and refresh

The feathery leaves that form fennel's lovely fronds make an elegant backdrop, but fennel belongs at the front of the garden. It replenishes the nitrogen content of soil and attracts bees and butterflies, making it beneficial to nearby plant companions. Native to the Mediterranean, this perennial is now cultivated all over the world. In the peak of summer, fennel pops with a firework display of flat clusters of yellowish blooms: the umbels that are typical of the Apiaceae family, which includes dill, parsley, carrots, and celery.

Later in the season, greenish-brown fruits dot the umbels. Smaller than a sunflower kernel and oblong with longitudinal ridges, the fruits may resemble seeds, and indeed they are commonly sold as seeds at most grocery stores. But this is an aromatic fruit with a warm, sweet licorice flavor: The true

seeds are actually within these fruits. Fennel’s threadlike greenery and white juicy bulb advertise a light anise flavor, lovely in salads, slaws, and garnishes, adding its distinctively fresh bouquet to cool summer dishes.

THERAPEUTIC USES

Garden herbalists gather their own fennel fruits (in other words, seeds) by harvesting from the umbels, laying them out on a screen to dry, and then storing them in an airtight

container. Fennel was used widely in medieval times to sweeten, tenderize, and preserve fish and meat. Fennel seeds harvested at their peak pack a medicinal punch. The crushed seeds rapidly lose their aromatic potency, so it is best to store them whole prior to making a fresh or dried seed tincture or cup of tea.

Fennel is most often used as a digestive carminative to prevent stomach upset and alleviate gas and bloating. A common ingredient in laxative blends, fennel counteracts the mild cramps associated with many laxatives. In Europe, a syrup made of fennel, anise, and dill mixed with sodium bicarbonate makes up “gripe water” for colicky infants. Fennel tea is commonly drunk during lactation, as its calming properties pass to the baby through breast milk. Many also use fennel while nursing because it is a galactagogue, or an herb that helps increase milk supply. In Colombia, fennel is infused into *aguapanela,* sugarcane water, and given by the sip to support lactation or calm the stomach.

Many ancient texts refer to fennel’s restorative and strengthening effect on eyesight. This use corresponds with fennel’s antimicrobial aromatics, its touch of mucilage, and its hint of astringency, all of which help it heal sensitive membranes. A gentle and fragrant fennel infusion can make an effective soothing eyewash for conditions including conjunctivitis or blepharitis. Its medicinal qualities also make fennel a choice gargle for laryngitis, pharyngitis, or other inflammatory issues of the mouth and throat. A fennel syrup or infused honey is a tasty treatment for dissolving mucus in the respiratory tract or pacifying a cough.

Harvesting fennel, an image from the medieval Tacuinum Sanitatis

Candied Fennel Seeds

Fennel seeds, or *saunf,* are highly respected in Ayurvedic medicine and beloved in India, where saunf water is a common folk remedy taken to rejuvenate the constitution, ease indigestion, and alleviate constipation. Dried saunf is eaten by the spoonful as a crunchy, nutritive digestive aid. *Mukhwas*—candied seeds—are often made with fennel but can be made from a variety of other seeds like anise, coriander, and flax. Saunf mukhwas, candied fennel seeds, are an aromatic treat offered after meals to cleanse the palate, freshen the breath, and optimize nutrient assimilation.

{ Holy Basil }

Genus and Species: Ocimum tenuiflorum
Family: Lamiaceae

A globally sacred herb of vitality and resilience

Holy basil brings an aura of divine euphoria to every garden. An herb revered in Hindu tradition for centuries as the “incomparable one,” holy basil possesses an ethereal aroma that elevates those who tend it. Native to the tropical climates of the Indian subcontinent, where it grows wild, many gardeners worldwide have found an honorable spot in their plant beds for this easily cultivated medicinal herb. Holy basil grows as a shrubby perennial in its homeland, but it does not tolerate the cold and, like common basil, becomes an annual in more temperate zones, though it often reseeds for years to come.

The whole plant is considered holy. Even the soil it grows in is said to be blessed by divinity, nourished by a complexity of endophytic fungi—organisms that happily coexist within the plant and protect against pests. This

medicinal member of the mint family grows even more lush when its blossoms are plucked, thus ensuring an ongoing harvest of medicinal leaves and stems for the whole summer. With its penchant for luring bees and other pollinators, holy basil is a gardener’s boon. Holy basil is versatile, able to grow in a sunny patch of garden but also thrive in a dedicated flowerpot. A sprinkling of seeds can result in enough plants to fill a large container, thought to bring protection and gifts to the home they adorn.

THERAPEUTIC USES

Herbalists universally succumb to the sweet and airy clove-like fragrance of holy basil. The distinctively enticing flowers and leaves can adorn cakes and infuse honey. Its foremost flavor comes from eugenol, the volatile compound that the plant shares with cloves. Whether it's taken in tincture or tea form, wondrous holy basil can calm the disposition, clear away cognitive cobwebs, enhance mental clarity, and promote brain circulation. In the ancient practice of Ayurvedic medicine, holy basil is *rasayana,* an exalted status given to herbs that invigorate the body and promote longevity. It is known in this tradition as the "elixir of life."

Western herbalists consider holy basil an adaptogen, which means that it is capable of boosting resilience in the face of physiological stress. Science is piecing together the beneficial interactions between holy basil and the immune system, adrenals, and liver as well as studying its interplay with cortisol, blood sugar, and the body's detoxification pathways. Holy basil protects the body from toxins, and its potent antioxidants help maintain healthy cell tissue. Juice of the fresh plant is a traditional remedy for bronchial conditions, fever, and contagious infections. Whether this beloved herb is taken internally or applied topically, holy basil can subdue skin inflammations, itching, and irritation.

As an optimizer of the circulatory system, holy basil is a synergistic ally to other herbs in a formula. Sprinkled on berries or blended into a smoothie, it helps maintain balanced blood sugar. Combined with pepper and ginger, it strengthens the digestive fire. Partnered with ashwagandha, it supports the endocrine system. A blend of holy basil and turmeric, which tag teams against chronic conditions like arthritis, offers potent anti-inflammatory support.

Holy basil, or tulsi, has long been honored in the Ayurvedic tradition.

Worshipping *Tulsi*

In Hindu spirituality, holy basil is known as *tulsi* and considered the physical and botanical manifestation of the sacred goddess Tulasi, meaning “matchless” or “incomparable.” Making the most of this connection, people in India place tulsi in and around the home as a symbol of purification and protection. The plant is revered for its cleansing virtues and can be found in abundance around sacred sites and temples. A holy water of tulsi is made, then used to consecrate ceremonial spaces and sprinkle on a dying body in order to elevate the soul. Even the seeds and dried stems of tulsi are venerated and crafted into strands of beads for prayer and chanting.

{ Lemon Balm }

Genus and Species: Melissa officinalis
Family: Lamiaceae

A sunny herb to optimize moods

The herbalist's heart revels in pure joy at the delightfully uplifting fragrance of lemon balm. Lemon balm plays a beneficial role in the garden, summoning bees and pollinators while warding off gnats and mosquitoes. Once established, this perennial spreads merrily, making it a prized favor to share at plant swaps. Those with limited space can enjoy pot cultivation of this plant on a sunny windowsill or apartment balcony. Prolific throughout the growing season, lemon balm can be harvested up to three times per year if care is taken to prune back any signs of flowering buds. During these prefloral peaks, sprigs can be snipped and garbled, or cut and sifted, for use.

THERAPEUTIC USES

While every part of the plant is medicinal, the broad dark green leaves that grow lower on the stems should be reserved for the most potent medicine making. Fresh lemon balm is cherished for its citrusy aroma and bright flavor, which lends itself well to a unique pesto. Garden herbalists treasure lemon balm flower buds as decorative garnish for fruit salads and for simple infusions in honey or vinegar. The cheery refreshment of a simple lemon balm leaf sun tea is indeed balm for the summertime gardener’s spirit.

Lemon balm, also called heart’s delight, is said to bring merriment to those who use it. Sunny *Melissa* is especially

sought out by herbalists as an uplifting antidepressant to shine light on the winter blues. A tea or tincture of lemon balm can be taken any time of the year upon waking to fend off morning doldrums and soften anxiety. Lemon balm allays stress and quiets mental chatter, so it can also be taken at night to promote restful sleep. A glycerin extract of lemon balm conveniently placed on the nightstand can help both young and old recover from dark dreams when consumed in the wake of a nightmare.

Research homes in on lemon balm's benefit to the brain, enhancing attentiveness without causing drowsiness. It is as valuable in preventing cognitive decline and memory loss in elders as it is in enhancing focus in school-age children. The herb has an affinity for the nervous system, relieving agitation and taking the edge off frazzled nerves. When someone is uncomfortably skittish or feeling "butterflies in the stomach," lemon balm can be a soothing ally. Lemon balm is a simple remedy for a variety of digestive ailments.

Lemon balm is also well known as an effective antiviral. It has a special rapport with the nervous system, making it especially useful as part of a treatment for viral afflictions of the nerves such as herpes, chicken pox, and shingles. When these manifest in skin eruptions, tend them with topical lemon balm in the form of a wet herb poultice, tea wash, or herbal bath. Dried lemon balm can be powdered and sprinkled on weeping or oozing skin. Saturated leaves left at the bottom of a teacup can be applied to lesions and blisters. A sticky glycerite or tincture can be applied directly to affected areas. There is also a range of commercial lemon balm creams on the market. In all cases of viral outbreaks, including cold and flu, strong lemon balm tea is a choice beverage to be sipped around the clock.

Garbling lemon balm in preparation for a tincture

Garbling Herbs 101

“Garbling” is an old-fashioned term used by herbalists to describe the action of removing leaves from stems. Typically, stems are held in one hand while the other hand strips leaves from the stems in one swift motion. While garbling, herbalists look out for undesirable material among the plant matter, such as insects and discolored leaves. Stems are often set aside for making an infusion or going into the compost. From the herbalist’s perspective, garbling is a meditative and fulfilling activity showcasing hands-on herbalism and the beauty and aroma of a fresh harvest.

{ Lemongrass }

Genus and Species: Cymbopogon citratus
Family: Poaceae

A cleansing medicinal grass for flavor and freshness

A giant tuft of fragrant and medicinal bright green grass waving in a soft breeze adds an interesting texture to the garden landscape. In the warm spring, lemongrass seeds are easy to sow in moist soil. Given one or two feet (0.3 or 0.6 m) of sunny space in a deep pot or garden plot, lemongrass will fill its assigned radius with a dense cluster of leaf fans. Each has the potential to become a new plant when divided by tracing the leaf blade down the stalk to the root and separating it from the primary clump using a trowel. In areas with cool climates, lemongrass can be sheared back to about six inches (15 cm) tall and brought indoors to overwinter in a pot.

Lemongrass is a beekeeper’s friend. Its scent mimics the pheromones of honeybees, drawing colonies to the

neighborhood. It is also a rich source of citronella, which deters snakes and repels mosquitoes and ticks. When the green leaves reach a height of one foot (0.3 m), they can be snipped for medicine. The juicy leaf stalks are crushed or minced to add a fragrant lemony flavor to traditional Asian-inspired dishes. Lemongrass, native to coastal Southeast Asia, appreciates a substantial amount of water and is a perennial in the tropics, where it can grow to six feet (1.8 m) in diameter and three feet (0.9 m) in height.

THERAPEUTIC USES

Lemongrass teases the senses with the bright citrus flavor that makes it beloved in the herbal kitchen and apothecary. Refreshing and restorative, lemongrass is uplifting for those dealing with emotional or physical burnout and exhaustion. A pesto made from lemongrass can brighten any dish and contains a healthy burst of antioxidants, potassium, and vitamin C.

Aside from being a nourishing culinary herb, lemongrass is a traditional medicinal for an array of common household ailments. It is an aromatic carminative, capable of alleviating gassiness and bloating. A cup of lemongrass tea or a nibble of leaves can be a soothing remedy for an upset stomach. Its fragrant constituents are diaphoretic, producing a sweat. In Jamaica, lemongrass goes by the nickname “fever grass” because it is taken to reduce heat and treat the common cold.

As a reliable antispasmodic, lemongrass tea or tincture may alleviate menstrual cramps. An infused oil of lemongrass is a lovely massage oil for sore muscles. A lemongrass decoction works as a vermifuge, useful for destroying parasites.

The antimicrobial and antifungal compounds in lemongrass make it useful in personal hygiene protocols. A drop of lemongrass essential oil diluted in water can be used as a pleasant mouth rinse to reduce plaque, tend to swollen gums, and freshen the breath; it can also be spritzed into the mouth to treat thrush. A lemongrass-infused vinegar seems to alleviate dandruff when used as a scalp wash. It can also be dabbed onto the skin to help with ringworm. A tea of lemongrass makes a comforting sitz bath to pacify a yeast infection. Added to an everyday bath, it brings an energizing scent and energy of pure joyfulness.

Lemongrass stalks

Lemongrass *Limpia*

In traditions around the world, herbs play a role in the spiritual cleansing of space, mind, and body. A long, broomlike bundle of lemongrass can sweep away negative energies and stagnation—a practice called *limpia* in Spanish.

A lemongrass bundle used in a limpia, leaves swept across the body, can lift negativity. Energy healers might also recommend drinking lemongrass tea or floating a few leaf blades in a tub for a sacred bath to bring clarity of mind. Lemongrass is used in such rituals in folkways from Africa, the Caribbean, South America, and Mexico.

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{ Rosemary }

Genus and Species: Salvia rosmarinus
Family: Lamiaceae

A classic culinary herb to benefit the brain and circulation

Nothing invigorates the garden herbalist more than the stimulating aroma of fresh rosemary. This classic medicinal and culinary herb, resinous and sharp in flavor, is a favorite among garden clubs everywhere. In gardening zones six and warmer, rosemary can overwinter outside as an evergreen. For those in cooler climates, a potted rosemary plant adds a fragrant flair to a container garden.

In ideal conditions, rosemary can become a woody shrub growing several feet in diameter and height and providing an abundance of scented sprigs dotted with delicate light blue flowers. Rosemary thrives on rocky ground and sandy soils. Hailing from the rocky coastal cliffs of the Mediterranean, rosemary appreciates warmth, humidity, and breezy sunshine.

The species name *rosmarinus* derives from the Latin prefix *ros* and the root *marinus,* meaning “dew of the sea.” This name offers a symbolic tribute to rosemary’s peak flowering season, when its blue flowers stretch along the coastal terrain of its homeland, appearing to melt into the ocean horizon. Until 2017, the Latin binomial was *Rosmarinus officinalis,* a name that changed to *Salvia rosmarinus* to reflect new scientific findings that the plant is in fact a salvia, or sage. The species’ epithet, *officinalis,* meaning that it is the official medicinal species, is evidence that this plant has been sold in apothecaries and earned a long history of therapeutic recognition in Europe.

THERAPEUTIC USES

Rosemary enjoys a long tradition of accenting favorite family recipes. Popular around the holidays, it is often used for seasoning stuffing, lamb, stews, and soups. In ancient times, rosemary, as with many other aromatic herbs, was used to preserve meats and fish, not only for flavor but also because of the abundance of protective antioxidants present in the herb. Likewise, medicine makers often use rosemary concentrate to extend the shelf life of their herbal preparations, especially in perishable infused oils, salves, and creams.

These same preserving properties offer age-defying goodness within a person’s self-care routine as well. Whether one applies rosemary cream to joints for increased circulation or sips rosemary tea to soothe an upset stomach, one is certain to feel the effects of its cool yet invigorating stimulation.

A touch of rosemary-based shampoo or a couple of drops of the essential oil in a morning shower sets the stage for a productive day. A hair rinse with rosemary-infused vinegar soothes an itchy scalp and can prevent dandruff. Rosemary appears to enliven the circulation and support blood flow to the brain, where its antioxidants are thought to strengthen the memory centers and prevent age-related cognitive decline. A daily tonic of rosemary infusion may be given to elders to keep the mind sharp and boost brain function. Unaided by modern technology, ancient orators wore wreaths of pungent rosemary to assist in their recall of long speeches. The eye-opening aromatherapy of rosemary is well suited to supporting cognition in those of all ages, from youth to older populations. Accented with a rosemary infusion, a hot bath after a long day encourages circulation to dull, achy joints and deeply replenishes anyone suffering from mental fatigue. Rosemary at bedtime, though perhaps on the stimulating side for some, encourages mental

processing of the day and even prompts lively dreams, ensuring a sense of refreshment and restoration in the morning.

Fresh rosemary surrounds a bottle of essential oil.

Rosemary for Remembrance

In Shakespeare's *Hamlet,* Ophelia utters the phrase, "There's rosemary, that's for remembrance." It was tradition even then: Rosemary has rightly earned its place in the medicinal apothecary through thousands of years of traditional use for memory enhancement. Grecian students were among the earliest peoples known to employ rosemary's brainy benefits, by weaving rosemary sprigs in their hair or wearing them as a crown. An herb of ancient Rome and Greece, rosemary was depicted in Greek mythology as surrounding the nine daughters of Mnemosyne, the goddess of memory. Rosemary is now being studied for compounds it contains that are known to inhibit the enzyme acetylcholinesterase, implicated in the decline associated with dementia and Alzheimer's disease

{ Skullcap }

Genus and Species: Scutellaria lateriflora
Family: Lamiaceae

A protector and soother of the frazzled mind

Skullcap, a beloved medicinal plant among gardening herbalists, brings a classic look to the landscape with its daintily hooded blue tubular flowers and dark green foliage. A characteristic signature of skullcap is that all its blooms face one direction along the racemes, or flowering stalks, hence its species name *lateriflora,* meaning “flowers on the side.” The genus name *Scutellaria* refers to the appearance of skullcap’s calyx, the green cup that holds each flower with a “scute,” or visor-like protrusion resembling a hat or helmet.

Native to North American wetlands and meadows, skullcap thrives in moist conditions and grows well in both full sun and partial shade. A creekside garden or forest edge makes a perfect setting for skullcap to thrive. Deer and rabbits steer clear of the bitter herb, making skullcap a

useful companion plant for pest protection. Like most plants in the mint family, it has a spreading habit. Though not as aggressive as other mints, it does not like to be controlled and is hard to manage in a garden setting. Skullcap self-seeds for years and may surprise its cultivator by migrating to another spot with favorable growing conditions. In short, skullcap is a wild herb, and in its native territory it will often wander off to find its own chosen corner of the woods.

THERAPEUTIC USES

There may be a lesson in skullcap for those who have trouble yielding control over their surroundings (including their planned landscape). Tightly wound people may benefit from this herb, a gentle nervine especially suited for individuals who carry a lot of tension and experience anxiety about themselves and their environment. Skullcap softens the voice of the inner critic and quiets worry and mental chatter. It is often used by clinical herbalists in nighttime formulas for those troubled by late-night cognitive processing or tension leading to headaches.

Skullcap's unusual common name refers to its helmet-like flowers, and in keeping with the doctrine of signatures, that shape corresponds strongly with this plant's use as a balm for matters of the mind. Herbalists use dried skullcap for tea or use its fresh aerial parts—leaves, flowers, and stems—for tincture. In either form, it acts as a nerve tonic and mild relaxant, relieving spasms and tremors and treating frazzled nerves and exhaustion. It is a cooling remedy for a hot temperament. Scientific studies suggest its interactions with serotonin and receptors in the brain as potential catalysts for its calming effects.

There is a certain energetic connection between skullcap and the ability to release or let go. Folk herbalists recommend skullcap tea for relaxing at the end of the day or releasing pain, stress, worry, or grief.

Indigenous Americans, who have coexisted with skullcap for a very long time, have a close bond with the native plant. Their wisdom surrounding its use in childbirth and menstrual health is profound—also representing the surrender of control, as skullcap is thought to soften blockages in the body and is used to encourage menstrual flow and expel the placenta after birth.

Raindrops glisten on the leaves and flowers of skullcap.

Can Skullcap Treat Rabies?

There are many medicinal *Scutellaria* species around the world, but *Scutellaria lateriflora* is the one evocatively referred to as “mad dog skullcap.” This common moniker gained popularity during the 18th century, when skullcap was touted by some physicians as a preventive and treatment for those bitten by rabid dogs. The rabies virus was a new arrival in the Americas, brought with their domesticated dogs by European settlers. The severity of its symptoms caused tremendous fear. Ultimately, while skullcap may have induced a calming effect on those who took it as a curative, it was disproved as a remedy for rabies.

{ Spilanthes }

Genus and Species: Acmella oleracea
Family: Asteraceae

Electricity in plant form

To add a quirky twist to the garden, look no further than the jazzy spilanthes. Native to Brazil, these “buzz buttons” have a uniquely playful appeal. The button-like appearance manifests as sunny yellow gumdrops, each dotted with a red bullseye. A closer look reveals a tight cluster of tiny packed flowers forming a seed head. These blooms, called “electric daisies,” are plucked at their peak potency for use in the kitchen and apothecary. Some flowers may be left to self-sow, and the seeds of others can be collected to plant and tend to for next year’s summer crop.

This low-growing plant appreciates a sunny spot and sizzling heat. Spilanthes also loves a regular watering and will wilt dramatically if thirsty—simply offer it water and watch it spring back to life. Spilanthes makes a fun ornamental feature in a colorful pot on the porch, where it will catch the eye and enliven the atmosphere of summer

soirees. Spilanthes’s signature party trick is the electrifying buzzy sensation it creates as it explodes on the taste buds. Top chefs and mixologists around the world are importing its floral buttons for “tingle flower” cocktails, infused salts, and herbal desserts.

THERAPEUTIC USES

The zingy sensation of spilanthes is attributed to compounds called alkamides, which also impart its potent medicinal quality. Other herbs rich in alkamides include echinacea (or coneflower, blossom and root), yarrow (root), cayenne (fruit), and prickly ash (bark).

These herbs share one thing in common: They are traditionally used for toothaches, a usage that corresponds with yet another common name for spilanthes, which is “toothache plant.” Alkamides, most potent in a tincture but also accessible by chewing on the plant, are slightly anesthetic and cause a numbness that can prove useful in quelling irritations of the mouth. Alkamides are strong sialagogues, causing salivation and providing relief for a dry mouth and tender gums. A tincture of spilanthes included in a spray formula can also relieve a sore throat.

Spilanthes is a formidable anti-inflammatory remedy in any flare-care protocol, especially when applied topically. Consider a spit poultice—a folk medicine way, applying a

chewed-up wad of the flower directly onto the skin—in acute situations such as bee stings, spider bites, boils, and blisters. A mist of spilanthes tincture in a spray bottle with rose water and aloe juice is a refreshing aid for any raw and sensitive tissue conditions, including sunburn.

Spilanthes may also be used to enhance a revitalizing facial mist or cream. The specific alkamide in spilanthes, spilanthol, is the subject of current study among Brazilian cosmetic companies because of its reputation for minimizing wrinkles.

Distinctive flowers of spilanthes

Jambu Tacacá

In its Amazonian homeland of Brazil, spilanthes is known as *jambu.* Jambu is a famous staple as both medicine and food in many regions, and it is commonly found at food stands. Its tender green leaves, not unlike an effervescent watercress, are used to garnish salads and soups. In northern

Brazil, spicy jambu leaves are an essential part of a signature regional dish called *tacacá.* This mouthwatering Amazonian soup is made with jambu, cassava root broth, shrimp, and peppers, and traditionally served hot in a gourd.

{ Stinging Nettles }

Genus and Species: Urtica dioica
Family: Urticaceae

A tough exterior guards the most nutritive plant on the planet

Stinging nettles hold an exceptional space in the herbalist's heart. Neither ornamental nor the loveliest or most fragrant of plants, reliable nettle patches are still treasured. Nettles in the garden or in a wild spot close at hand promise deep nourishment, playing a special role in replenishing nutrients and trace minerals to garden soil. A decoction of nettles makes a rich plant fertilizer and can act as a booster to a compost pile. A nettle patch also keeps nosy meddlers away. The coarsely toothed leaves and ribbed hollow stem of stinging nettles are covered by fine hypodermic needle hairs that cause painful stings followed by itchiness, redness, and swelling.

Because of this sting, nettles require presence and careful attention to harvest. Protective clothing, gloves, and scissors come in handy. The early spring, before nettles

come into flower, is the optimal time to harvest the younger greens. Summer brings strands of tiny light green flowers that eventually droop into hanging seed bunches. As the year progresses toward late summer, the seeds turn brown and the plant becomes more fibrous. Some herbalists harvest the seeds and roots for medicine at this time. Nettles die back to the ground in winter and help rebuild the soil for healthy new growth the following spring.

THERAPEUTIC USES

Nettles also reestablish vibrant health in the body. As an edible, stinging nettles are one of the most beloved medicinal and nutritive hybrid food-herbs around the world. Vitamin-packed, chlorophyll-rich, iron-boosting, and mineral-supportive, nettles’ compounds make this green a powerhouse.

Kitchen herbalists delight in a basket of versatile fresh nettles. A light steaming deactivates the stingers, and the tender cooked greens enhance a variety of creative recipes or can simply become an earthy spinach substitute of sorts. Drying the leaves and stems also weakens the stingers for easier handling. Dried nettle leaves are typically stored in an airtight container for making daily nettle infusions, prepared simply by pouring steaming water over a generous amount of dried nettle, then steeping in a lidded jar overnight before straining and drinking. Note that this rich infusion liquid is not the same as a tea; nutritive nettles are dense with minerals and benefit from the long steep time of an infusion.

Nettle infusions are considered an herbal staple for those in their childbearing years. They can offer deep nutrition

during pregnancy, replenishing the blood while preventing swelling and edema. As a galactagogue, stinging nettles support the body’s ability to produce milk. Nettles can likewise provide a blood-building tonic for menstrual maladies such as low energy, bloating, and mood swings. Daily nettle infusions are supportive for anyone experiencing depletion, anemia, pallor, or weakness.

Nettles have a distinct diuretic action and can be taken in tea or tincture form to encourage healthy urination and clear out swelling and edema, kidney stones, and uric acid, which affects gout. Nettle leaf, seed, or root is often taken in supplement form to decrease the symptoms that come with prostate issues. A daily dose of nettle-infused vinegar delivers a nice concentration of calcium, magnesium, and other important minerals. Many herbalists recommend a daily dose of nettles in anticipation of hay fever or allergy season.

Magnified, the stingers of nettle look like needles at the ready.

Urtication: Pain to Promote Healing

The sting of nettles may seem a bother, but they actually deliver a medicinally active injection through those sharp, stabbing hairs—a treatment known to herbalists as urtication. Urtication involves slapping bundles of fresh nettles onto the skin to stimulate circulation and relieve pain and lethargy. Urtication is a common, though painful, folk treatment practiced around the world to manage musculoskeletal ailments such as arthritis and rheumatism. All those needles flood compounds such as acetylcholine, serotonin, histamine, and formic acid (the same compound that ants contain in their saliva) directly under the skin where applied. The practice of urtication is not for the weak of heart!

{ Sunflower }

Genus and Species: Helianthus annuus
Family: Asteraceae

An Aztec shield flower to conquer fevers

The Aztec language Nahuatl speaks of *chimalxochitl,* or “shield flower,” a reference to this large flower’s association with their warrior sun god. Ancient signs of cultivated sunflowers can be tracked back several thousand years to Mesoamerican lineage in regions known today as Mexico. Its Spanish name, *girasol,* or “turns with the sun,” reflects the heliotropic motion of the flowerhead’s gaze as it follows the sun east to west throughout the day.

Legend holds that conquistadores attempted to repress sunflowers, recognizing their associations with the sun deity and the empowerment they symbolized to the people who grew them. These efforts were futile: Even the Spaniards eventually recognized the sunflower’s undeniably glorious ability to spread seeds across the globe. Beyond the sensational visual display of their ray-lined flower discs and

the promising embrace of their heart-shaped leaves, sunflowers benefit the earth with deep taproots that aerate and remediate the soil. The blossom is packed with a multitude of tiny nectar-filled blooms, which attract bees and later become a plentiful source of oil-laden seeds for birds.

There are many ways to reap the healthy benefits of these garden stars. Few sunflower admirers know that these lofty plants are edible at every phase of their growth cycle. Easily grown sunflower sprouts, or microgreens, are high in protein and contain a complete set of amino acids and an impressive level of zinc and B vitamins. Nibblers can munch on sliced sunflower stalks like celery, or get creative with a sunflower root slaw.

Sunflower seed kernels are renowned for their nutrient density and satiating sustenance. *Atole de teja* is a recipe of Aztec origin for a ground sunflower seed porridge (see Mexican *Champurrado,* p. 59), a hearty breakfast served at traditional family gatherings. For sumptuous cuisine, the tight green sunflower buds are edible and can be prepared similarly to artichoke hearts.

THERAPEUTIC USES

Coarsely textured sunflower leaves are medicinal, growing more bitter and potent as they age. For headaches, the large leaves can be blanched and draped over the forehead warm or cool, according to preference. The warm infusion is diaphoretic: It induces a sweat and brings down heat. A traditional *curandero* (healer) might treat a fever by rubbing a sunflower leaf liniment over the body with friction, then wrapping the person up in blankets to elicit sweating.

The leaf is also used as an expectorant. A leaf syrup or simple decoction can be taken to clear the phlegm of bronchitis, and dried leaves added to herbal smoke or tobacco leaves facilitate expectoration.

Sunflower leaves are astringent and can be used to dress and dry out a wound. A spit poultice is a quick remedy for bee stings, itchy insect bites, and scrapes. The leaves can be soaked in rum to make a liniment for achy, swollen joints and sprains. A similar remedy calls for sunflower greens and cayenne soaked in alcohol or vinegar to be used as an embrocation, a pain-relieving liquid like a liniment, to rub into sore muscles. The yellow rays surrounding the flower disk are rich in flavonoids, and an infusion of these petals can nourish healthy collagen. A flower infusion also makes a restorative gargle for bleeding gums or a sore throat.

The natural geometry of a sunflower bloom up close

Sunflower, Fun Flower

Sunflowers inspire fun and learning in the garden, especially for the little ones. The big seeds germinate easily and send up healthy shoots, easy to observe. Even grownup herbalists delight in the childhood nostalgia of watching a sunflower become a towering plant. Kids are in awe when they see all the sunflowers looking up at the sun in unison. School-age students can trace the Fibonacci-sequenced spirals on the flower disc and learn about math. One sure way to capture the adventurous imagination of a child is to build a sunflower fort garden where the children can enjoy their own tea parties!

HERBAL HERITAGE

Curanderismo: A Latin American Healing Lineage

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In Latin America, gardens are as diverse and colorful as the tapestry of the culture itself. Even in urban neighborhoods, grandparents tend to courtyard, patio, and rooftop gardens filled with roses; they grow traditional foods like tomatoes and chilis and medicinal herbs like sunflowers and lemon verbena. Deep in the Amazon Basin, farmers steward jungle land, cultivating yucca, Brazil nuts, quinoa, coffee, and cacao. Banana leaves wrap food for cooking and hearts of palm add flavor to dishes.

Desert dwellers harvest prickly pear cactus and agave for food, medicine, and spirits. In the *milpas,* or cornfields, ancient Indigenous wisdom inspires companion gardening methods still in practice today. One example is the three sisters method: the simultaneous cultivation of corn, beans, and squash together in the same space. Tall corn stalks provide a pole upon which the beans climb. Beans fix the nitrogen in the soil, and squash provides a protective ground cover of prickly greenery, which wards off pests. The trio grows well together and, when harvested, represents a sustainable diet complete with a full spectrum of amino acids.

Corn, beans, and squash, called “the three sisters,” symbolize the agricultural know-how of the Latin American tradition.

PRE-HISPANIC FARMING PRACTICES

The ancient Indigenous farmland of Mesoamerica was a wonder to behold. The Aztec were inventive, devising a network of aqueducts and floating garden islands called *chinampas,* which drifted on vast lakes. The Inca worked the dry mountainous terrain by constructing complex terraces with intricate irrigation systems embedded into the landscape. Maya farmers managed dense forests for cultivation, using a prescribed fire practice now known as slash-and-burn and thereby creating plots of cropland rich with fertilizing ash. European conquistadores brimmed with envy and awe upon encountering the abundance of the land and evidence of such highly developed farming techniques.

In this 16th-century Mexican illustration of the construction of the Aztec city of Tenochtitlan, workers are establishing chinampas, *floating gardens, throughout the lake.*

Chinampas exist to this day in Mexico City. Here a boater poles alongside one in 2019.

Pre-Hispanic Mesoamerican cultures fostered a rich record of medicinal knowledge. The Aztec maintained libraries of medical codices. Spanish explorers described market streets lined with herbalists peddling plant medicines and apothecary shops stocked with impressive arrays of prepared remedies. But Spanish conquistadores not only seized land, they also wrought genocide and devastation. Many written records of traditional medicine were destroyed during this era, yet Indigenous descendants continue to pass medicine wisdom down through the generations, thanks to oral storytelling and practical example.

A LIVING CULTURE OF HEALING

These conquests forced Indigenous societies to assimilate to a Eurocentric way of life. Survivors incorporated their

traditions into the newly imposed culture and religion. African slaves were forcibly imported, their medicine ways and their Afro-Latino and Afro-Caribbean descendants contributing significantly to the emerging system of Latin American folk healing practices known as *curanderismo,* derived from the Spanish word *curar,* meaning “to heal.”

Curanderismo is a living model of healing whose specific practices vary according to its regional origins. It includes elements of ancient Indigenous Mesoamerican wisdom enriched by the healing traditions of the African diaspora and infused with influential Catholic and Spanish customs.

Medicinal herbs generate healing smoke in the curanderismo tradition.

The ancestral roots of curanderismo are best expressed in the ceremonial treatment of the psychospiritual as an essential component of physical health care. In this tradition, spiritual and supernatural effects on health are taken seriously and remedied with herbs, diet, prayer, and ritual. The shared traumatic history of Latin Americans has

instilled a sense of resilience into their health culture, focusing on the powerful bond between the soul and body. A *susto,* or a traumatic fright, can result in soul loss and have grave effects on physical health, similar to PTSD.

COMMUNITY COMPASSION

The curandero (or healer)—a term considered gender-neutral in this book—exercises compassion for those who are troubled with trauma, envy, or malice. The healer might prescribe a series of spiritual baths using roses or lemon balm to comfort the soul back into bond with the body. They might sweep the body with herbs like basil or lemongrass in a *limpia,* or a cleanse, to remove unhealthy *bilis,* or rage, that may bring illness.

In curanderismo, the sense of belonging in the community contributes tremendously to a person's well-being. Resocialization with family and neighbors after illness is often a task facilitated by the curandero and necessitates community compassion. Health-oriented communities can also lay the groundwork toward embracing traditional medicine, which begins with unraveling the perspective that the only acceptable medical model is the one based on allopathic, or Western, standards of practice. Many Latin Americans today opt for allopathic care in certain circumstances and curandero care in others.

Today, curanderismo perseveres as an important facet of public mental and physical health care. This is especially true among marginalized communities affected by disparities in access to care and among people dedicated to preserving connections to the healing ways of their ancestors.

As Charles Garcia, a third-generation curandero and practicing herbalist, puts it, "When we feel the tides of modernity begin to strip us of our identity, curanderismo in

all its various forms reminds me we can still heal with plants, ritual, and heart. Without this we are just lost children.”

Leaves and vines essential to the traditional ayahuasca preparation, a visionary ritual of the Amazon

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Herbs Valued in the
Curanderismo Tradition

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DRAGON’S BLOOD CROTON
Croton lechleri

LEMONGRASS
Cymbopogon citratus

PRICKLY PEAR CACTUS
Opuntia spp.

RUE
Ruta graveolens

SUNFLOWER
Helianthus annuus

. . . . . .

6. Weedy Herbalism

BURDOCK
CHICKWEED
DANDELION
GROUND IVY
HONEYSUCKLE
JAPANESE KNOTWEED
KUDZU
MIMOSA
MULLEIN
PURPLE LOOSESTRIFE
YELLOW DOCK

A close-up shows the delicate stamens, or pollen-bearing parts, of the mimosa flower.

Wild & Wondrous Weeds

When it comes to weeds, one person's woe is another person's wonder—and vice versa. The very definition of a weed is a plant that pops up where it is not wanted. This judgment often gives way to a preconceived notion of what natural versus refined

spaces should look like. Culture has labeled certain plants as common weeds based on an expectation that they be controlled within the context of a lawn or garden. A lawn, for example, is defined as monoculture of intentionally planted grass and carefully manicured landscaping. A garden is a zone to be weeded vehemently. But there are herbal wonders in among these plants we call weeds.

Friend or foe, the subjective value of a weed is in the eye of the beholder, and herbalists have shifted this perspective into a love affair with weeds. A weed-wise herbalist finds a treasure trove of free food and medicine in a patch of unruly volunteers. To the lament of the neighbors, it's not uncommon to find an herbalist's lawn filled with stray violets, dandelions, chickweed, and plantain. What one person may behold as wild beauty and medicinal and edible abundance might be considered an eyesore by the lawn lover next door. But to an herbalist, grass may be the unwanted "weed."

WILDCRAFTING WEEDS

Common weeds are so persistent that humans are better off finding creative ways to use them rather than fighting their presence. Wildcrafting, or gathering plants from the wild, is a treasured herbal pastime. Many folk herbalists focus all of their wildcrafting on an area's common weeds, which tend to be prolific and sustainable sources of food, medicine, and craft material. As a bonus, neighbors tend not to mind being asked if someone can dig up their dandelion roots or pull down their kudzu.

Honeysuckle—an invasive vine with fragrance divine

People who work with herbs cultivate an intimacy with their regional landscape and come to appreciate those plants that are readily available. Bioregional herbalists learn to responsibly discern between bountiful plant populations and those that are precarious and better left alone for ethical and ecological reasons. Certain native woodland medicinal plants, such as black cohosh, for example, deserve special care to ensure their long-term survival and protect their habitats.

This chapter promotes the joyful gathering of weeds by sharing harvesting tips for wildcrafters, recipes for kitchen herbalists, and remedy how-tos for medicine makers. Next time the skeptic next door frowns upon your weed-speckled yard, impress them with a gift of chickweed pesto or a jar of pickled burdock roots packaged up in a honeysuckle vine basket.

WILLFUL WEEDS

As chummy a relationship as herbalists and weeds enjoy, nobody wants a pushy friend. Even herbalists can recognize the problematic role of invasive plants. These non-native species, removed from their homeland habitat and far from their natural competitors and enemies, take vigorous hold on a landscape, often dominating and overpowering native plant territories. Asian kudzu, for example, presents an urgent concern in the southeastern United States, where it has conquered miles of farmland and forest, pulled down trees, and even engulfed homes and entire mountains. Likewise, wild black cherry, native to the United States, has invaded Europe. While a soilborne pathogen prevents the rampant spread of wild cherry trees in North America, it is not strong enough to keep their European populations under control.

Harvesting burdock root

Invasives outcompete native species and disturb the food chain by destroying plants that serve as food for native animals and pollinators. Whereas the overharvesting of some native plants, such as wild ramps and ginseng, puts those species at risk of extinction, herbalists can barely put a dent in, say, a kudzu patch even after a prolific harvest.

Ecologically minded herbalists may be staunch conservationists, fighting on the front lines of invasive encroachment: activism practiced with shears and trowels. They lovingly gather honeysuckle for colds while exhaustively digging out mats of its twisting vines to restore native plant habitats at a creek's edge. Herbalist philosophers ponder the deeper meaning of nature's intentions and look for the silver lining when it comes to invasives. Does rampant purple loosestrife infiltrate wetlands for its phytoremediating ability to filter pollutants from the water? Is Japanese knotweed proliferation pointing

humanity toward a potent remedy for the Lyme disease epidemic? While the devastating ecological consequences of invasive plants are not to be underestimated, herbalists grapple with finding wisdom in nature’s nuanced expression.

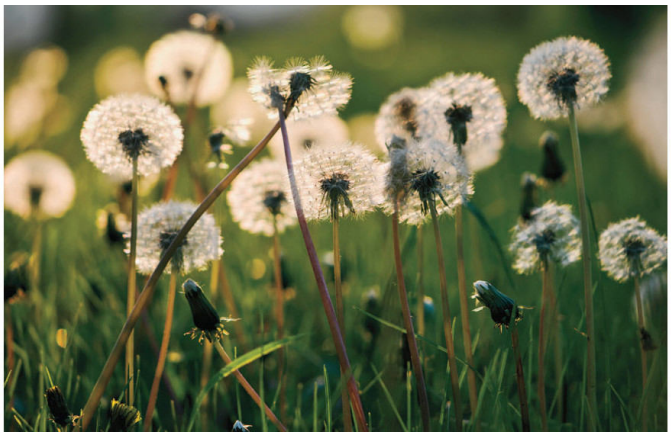
The flower of Verbascum thapsus, or common mullein

WISDOM WEEDS

“Plants can sometimes overwhelm illness the way they overwhelm their environment,” pondered the late Dr. James Duke, distinguished American botanist, explorer, and author. Opportunistic weeds exhibit a strong sense of fortitude and survival in the most unwelcoming of environments. Whether a burdock root pushes up through clay, a mullein stalk rises up from a rocky crevice, or a dandelion breaks through a crack in the sidewalk, weeds display a resilience that echoes the type of vigorous health to which humans aspire.

There is innate wisdom to be drawn from the healing presence of weeds. Rather than viewing them as a gardener’s bane, herbalists see them as an invitation to strength. Chickweed is consumed for its abundance of bone-fortifying minerals; recipes containing iron-rich yellow dock are crafted for its blood-building component.

Many non-native weeds are accompanied by anecdotal tales of cultural relevance from their homeland. Ground ivy, for example, has a history of being a main ingredient in the original ales of the Anglo-Saxon brewing tradition. Even the most unpopular of weeds come with anthologies of promising scientific research, such as Japanese honeysuckle as a potent antiviral or Japanese knotweed as a source of the healing antioxidant resveratrol.



Dandelions going to seed

WANDERING WEEDS

Every weed has a story and lineage tracing back to its place of origin. Many medicinal herbs accompanied European colonists on their travels, intended to seed their medicine gardens in faraway lands. These newly introduced herbs, including dandelion and chickweed, subsequently escaped their garden plots to volunteer as weeds in new places. Horticulturists enamored with ornamental plants also

brought exotic species to novel habitats for landscaping purposes.

Sometimes what began as careful cultivars in a manicured garden went on to become the nuisance weeds of a region. Mimosa tree in the eastern United States was originally planted for its eye-catching aesthetics. Ironically, it now seeds itself along woodland edges and has gained a poor reputation for taking over a landscape. Kudzu was intentionally planted in Appalachia for erosion control and livestock feed, its impressive growth habits generating excitement until it proved rampant. Purple loosestrife, valued as an ornamental, caught a lift on a visiting ship, its seed wandering the waterways until it found a place to anchor.

In other words, the plants presented in this chapter may not be considered weeds worldwide. Every part of the world has its own green invaders with which to contend. In Asia and Europe, for example, American goldenrod has taken over vast amounts of land and poses a risk to native pollinators. Yet herbalists find creative ways to use even the most undervalued of invasives. Kudzu, known to some as “the plant that ate the South,” is a veritable medicinal treasure chest that also enjoys edible and craft uses.

This 1557 German herbal depicts shepherd's purse (left) and mullein, now considered weeds but both valued medicinally in those days.

{ Burdock }

Genus and Species: Arctium lappa/minus
Family: Asteraceae

A bitter biennial for prebiotics and deep detox

An Asian and European native, burdock has become a familiar weed in most parts of the United States and Canada. A biennial, first-year burdock is easily distinguished by the basal rosette of roughly textured, elephant ear–like leaves growing low to the ground. The heavily veined leaves have a heart-shaped base, wavy edges, and a sturdy midrib.

As the first winter of its two-year life approaches, the leaves die back and the root overwinters. The second spring brings a new look for burdock: a lofty branched central flower stalk shoots upward, covered in increasingly smaller opposite leaves. During the late summer of its second year, burdock is in its prime, producing green burrs exploding with tufts of stringy purple petals. As these petals fade, the seed-

filled burrs turn brown and easily disperse by clinging to fur, hair, and clothing of passersby with their hooked barbs.

Both *Arctium lappa* and *Arctium minus*—used interchangeably by herbalists—produce a large, deep, and useful taproot. Fleshy in the first year, it becomes tougher and woodier as it progresses through its second year. The best time to harvest burdock root is in the late autumn at the end of its first year, when the energy is maximized in the root, where the plant stores its livelihood for the following spring. Sturdy tools are definitely required to dig out this deep taproot, which can grow a foot (30 cm) or more in length and measure an inch (2.5 cm) or more in diameter.

THERAPEUTIC USES

Edible and medicinal burdock roots take center stage in the kitchen. They can be sliced and pickled or stir-fried, added to soups, or boiled and mashed. The leaf stalks and peeled center stem are edible when tender and can be sautéed for a delicious treat.

The root is a valuable source of the prebiotic inulin, a food supply for beneficial bacteria colonies in the digestive system. Eat burdock as a vegetable or boil and sip as a decoction to reap the benefits of inulin. Inulin is not soluble in alcohol, so a burdock tincture would not deliver this benefit, but it is often added to digestive formulas as a tonic to stimulate digestion and boost a weak appetite. Warning: Burdock tincture does have a distinctively bitter taste.

Burdock roots are favored for their powers of detoxification and preventing cellular damage from toxins. They may also dislodge deep toxins throughout the body, delivering them to the liver to process. A classic liver-support combination of burdock and dandelion roots works especially well for this deep detox work.

Burdock root remedies are used internally to support the liver in addressing chronic skin conditions such as boils, psoriasis, and eczema. Leaves of burdock are also used topically for infected and flaring skin conditions. For this, a large leaf can be blanched and applied while warm to irritated outbreaks, or the leaves can be chopped up into a mash for a topical poultice. Burdock seed–infused oil is high in beneficial fatty acids and can be very nourishing to the complexion and scalp. Many happy burdock oil users even claim that it encourages hair growth.

Preparing burdock root for pickling

Pickled Burdock Roots

Flavorful pickled burdock roots are a nutty, fleshy staple in Asian culture. To prepare, slice the fresh roots into chips or sticks. A quick simmer in a bit of water will soften up the tougher roots. Strain them and put them aside in a bowl, reserving the water for brine. Next, sprinkle shredded ginger and diced garlic evenly among the roots. Divide this mixture into jars, adding a brine composed of equal parts of the simmering liquid plus apple cider vinegar, tamari, and rice wine vinegar. Cap the jars, shake, and let them sit for a couple of days in a cool, dark spot. Refrigerate until ready to enjoy.

{ Chickweed }

Genus and Species: Stellaria media
Family: Caryophyllaceae

A humble edible weed with medicinal star power

One beloved herbal hallmark of spring is a lush green patch of new chickweed speckled along creeks, beside woodland trails, throughout last year's garden beds, and in shady spots on the lawn.

Native to Europe, chickweed is common throughout North America, remarkably emerging during the frost-touched early spring. As the season progresses toward summer, chickweed thins out and fades to yellow, dying back for the summer only to reemerge in the cool sunshine of autumn. Its scientific name, *Stellaria media,* translating to "in the midst of stars," is reminiscent of its starry white flowers, which appear later in the plant's growing season, toward summer. The blooms have five tiny petals so deeply cleft that there appear to be 10 in total. Bright chickweed's crisp leaves are oval and pointed.

A forager’s favorite, chickweed is easy to gather by hand and should be harvested in its prime before it becomes stemmy and discolored. Many herbalists prefer fresh chickweed, though it can be dried and saved for tea. The fresh herb can be juiced or used to make topical salves, infused vinegars, pesto, tinctures, and infusions. Because it is such a liquid-saturated plant, many herbalists lay it out on a screen or cloth to allow it to wilt overnight before using it for infused oils, salves, or tinctures.

THERAPEUTIC USES

Chickweed is a wonderful edible herb and makes a tasty salad green. Harvested at peak potency, it’s succulent and juicy with a refreshing earthy taste, making for a convenient

trailside snack. High in calcium, chickweed lends its nourishment to bone-building infused vinegars. Adding chickweed to soups, casseroles, or stir-fries gives a dish a nutritious lift. Making a succus of chickweed with a wheatgrass juicer is one method of concentrating its cooling essence into a beverage. A big batch of fresh chickweed can be juiced and frozen in ice cube trays for a daily shot of nutrition.

Chickweed is quintessentially cooling and soothing, due to its watery, mucilaginous nature. This chill comforter is often applied topically to hot, dry, irritated, and itchy skin. A mash of the plant works well as a fresh poultice, or a chickweed infusion can be used as a soothing wash. Chickweed is also very popular in salves for a range of inflamed, chapped, or bothersome external issues such as rashes or sunburn, as it has the characteristic ability of stopping itching in its tracks. A dressing of fresh chickweed or a compress of the infusion is well-known for refreshing and moisturizing depleted or infected eyes.

Chickweed infusion taken internally can cool various inflammatory flare-ups and “cleanse the blood,” especially as a springtime tonic. A decoction of the fibrous roots offers an instant cooldown, while an infusion of the aerial parts is a mild diuretic, encouraging urination and calming urinary tract infections. With its soap-like saponin molecules, chickweed has developed a reputation in herbal lore for dissolving fat cells and curbing obesity.

A tincture or strong infusion of chickweed taken daily has helped many find relief from lumps, bumps, swollen lymph glands, and cysts (including ovarian cysts). Saponin compounds are also thought to interact with human cell membranes in a way that allows for improved assimilation of nutrients.

A basket of chickweed may mean salad or pesto.

Wild Chickweed Pesto

Look no further than your yard to gather your ingredients to make this classic herbal recipe. You will need: three cups of chickweed leaves and stems, two cloves of garlic, ¾ cup of seeds or nuts (walnuts, pine nuts, or sunflower seeds work well), ½ cup olive oil, and ½ cup grated Parmesan cheese (or nutritional yeast). Begin by placing the seeds/nuts and garlic in a blender or food processor. Pulse until they are finely chopped. Add the chickweed and Parmesan cheese. Next start adding the olive oil, beginning with ¼ cup, and blend, slowly adding more olive oil for your desired consistency. Stir in a pinch of salt and a pinch of pepper to taste.

{ Dandelion }

Genus and Species: Taraxacum officinale
Family: Asteraceae

A liver-loving bitter with something for everyone

One of the most ubiquitous weeds on Earth, dandelion heralds springtime for some while dampening the spirits of others who fight its presence on their lawns. In French it is *dent-de-lion,* or “tooth of the lion,” referencing its coarsely toothed leaf edges. One might also see the dandelion floret at peak flowering as a dramatic appearance of a full golden lion’s mane. Characteristic of the Asteraceae family, the dandelion bloom is actually composed of hundreds of tiny flowers, visible only with a magnifying lens.

Resilient dandelion can be found everywhere, from sidewalk cracks to open meadows and lawns, from city blocks to fields and roadsides. From its dark green basal rosette of lobed leaves emerges a long hollow stem that carries the dandelion flower. When pinched, this juicy stem

exudes a milky white sap. Later in the season, the floret develops into a spherical snowball and airborne seeds blow away on the breeze. Beneath the ground, dandelion anchors itself securely with a deeply twisted beige taproot. To the delight of other more shallow companion plants, this beneficial beige root pulls available nutrients up from deep in the ground and deposits them back on the surface when the leaves drop in the late autumn. Dandelion roots have relationships with fungi and bacteria in the soil, helping to fix nitrogen, increase phosphorus, and aerate compacted soil.

THERAPEUTIC USES

All parts of the dandelion are edible and revered by the wildcrafter throughout the growing year. Flowers can easily be picked during their prime blossoming season, for tossing into salads or making infused wines or oils. The leaves are best harvested in the early spring, while tender. They can be eaten fresh, sautéed like cooked greens, or used to make herbal pesto, infused vinegars, herbal succus, infusions, or tinctures. Early spring dandelion roots are more palatable and sweeter than fall-dug roots, which are more bitter and have more medicinal inulin.

Bitter dandelion leaves are mineral rich and a reliable source of calcium, magnesium, and potassium. These have more beta-carotene, used by the body to produce vitamin A, than any other culinary greens. Dandelion leaves in particular have a reliable diuretic effect and are traditionally eaten or taken as an infusion or tincture to counteract water retention, swelling, and puffiness. In this capacity, dandelion leaf has been used medicinally as a diuretic to lower blood pressure while not depleting potassium levels as many conventional medicines tend to do.

Dandelion is the classic bitter herb and a core component of digestive blends. The slightly pungent taste of its leaves and roots stimulates gastric juices. Taken as a precursor to a meal, dandelion prevents bloating, flatulence, and constipation while promoting thorough digestion. Dandelion roots are rich in inulin, a prebiotic carbohydrate that feeds beneficial gut flora and ensures a healthy GI biome, an important way to promote overall immune and digestive well-being. Dandelion roots must be eaten, drunk in a decoction, or boiled in a soup to benefit from this healthy inulin content, as this compound is not extracted in a tincture.

Dandelion is most famous as a trusted liver supporter. Drinking dandelion root decoctions or eating fresh dandelion greens in the spring are time-honored folk practices to cleanse the liver and support the gallbladder. This gnarly

medicinal root can protect the liver from harm, stimulate bile flow, and normalize the bowels. Because of these qualities, dandelion encourages skin health from the inside out.

Fresh dandelion greens, nutritious and easy to find

Roasted Root Coffee

One way to enjoy the daily benefits of dandelion roots is to roast them and drink the brew as a coffee substitute. Historically, many seeds, leaves, and roots have been used in recipes for coffee-like beverages. Beet, chicory, and dandelion roots have even been roasted and used as coffee alternatives during times of shortage in recent history. Persimmon seeds, buckwheat groats, okra seeds, barley, and acorns—all have been put to the test of roasting to yield a robustly nutty and sweet beverage. The inulin-rich roots of dandelion and chicory have emerged as traditional favorites and can now be found for sale commercially.

{ Ground Ivy }

Genus and Species: Glechoma hederacea
Family: Lamiaceae

A creeping balm for ears, noses, and throats

Creeping Charlie is a suitable nickname for this garden carpet, which favors a slow, low-growing sprawl across sunny lawns and shady edges. This silvery-green ground cover is composed of small scalloped leaves dotted with lipped purple flowers and carrying a sage-like aroma.

No gardener would begrudge such a seemingly modest and lovely plant, but it challenges the best-kept landscapes, is tough to remove, and renders toxic risk to grazing horses. Still, some herbalists welcome ground ivy as it settles in shady areas on bare ground where other plants fail to thrive. The herb creates thick mats and offers an invigorating fragrance, as so many mints do.

A member of the Lamiaceae (mint) family, ground ivy possesses a signature scent, reminiscent of catnip or

pennyroyal and indicative of the presence of the compound pulegone. Like many therapeutic herbs, ground ivy heralded from Europe, where it was valued as an ornamental and medicinal plant. It has since escaped cultivation and now thrives as a weed in most of North America and many other parts of the world.

THERAPEUTIC USES

This sure-footed creeper packs a medicinal punch as a slightly bitter and astringent aromatic. Herbalists turn to the

aerial parts of ground ivy for common ailments of the respiratory tract and mucus membranes, especially when those are marked by stubborn phlegm (known to herbalists as catarrh). Ground ivy is anti-catarrhal and specific for conditions exacerbated by boggy congestion in the head, whether dull headaches, hay fever, ear pressure, crusty eyes, or sinus congestion.

Ground ivy has long been traditionally used as a classic ear/nose/throat herb, particularly indicated for pressure in the ears, tinnitus, or vertigo. Many generations of herbalists have relied on it as an eyewash for soreness and wateriness, film or cataracts, black or bruised eyes, and poor vision. For the throat, ground ivy's aromatic astringency exerts a gentle antimicrobial and tissue-healing action. Deeper into the bronchial tract, ground ivy can help loosen mucus associated with lung ailments.

Versatile in various common preparations, this herb can contribute its distinctive flavor and medicinal quality to a tea, tincture, infused honey, or syrup, all standard remedies for both colds and flus and for allergies. Some herbalists even enjoy the bold green succus, or fresh juice, of the plant's aerial parts as a potent shot. Ground ivy has a reputation in folk medicine for removing heavy metals from the body and was at one point used for the treatment of "painter's colic" by artists who used lead-based paints.

Many aromatic herbs with a slight bitter quality offer digestive support. Ground ivy exemplifies these characteristics, and a cup of its tea or a few drops of tincture can help stimulate digestion and alleviate gassiness and bloating. In a pinch, a ground ivy poultice can help minimize the inflammation of bug bites and stings. The herb is a popular folk remedy to soothe the painful aftereffects of urtication from stinging nettle.

Noblemen enjoy tankards of ale, likely crafted with herbs, in this 11th-century calendar.

Alehoof: Hops’ Brewing Forebearer

Alehoof, one common name for ground ivy, is a throwback to the plant’s ancient use in the production of “gruit ale” by the English and Anglo Saxons. Before brewing with hops, ale was crafted with gruit—a blend of wild herbs foraged from the land for their earthy, bitter, and aromatic tones. Alehoof (or ground ivy) was commonly used, along with herbs like yarrow, heather, mugwort, and spruce. Ground ivy in particular enhanced a beer recipe with its clarifying, sediment-clearing properties. “Gill-over-the-ground,” another common name for ground ivy, refers to its use in brewing ales at a time when a half-pint was called a “gill.” Today, gruit ales are making a comeback among adventurous wildcrafting backyard brewers.

{ Honeysuckle }

Genus and Species: Lonicera japonica
Family: Caprifoliaceae

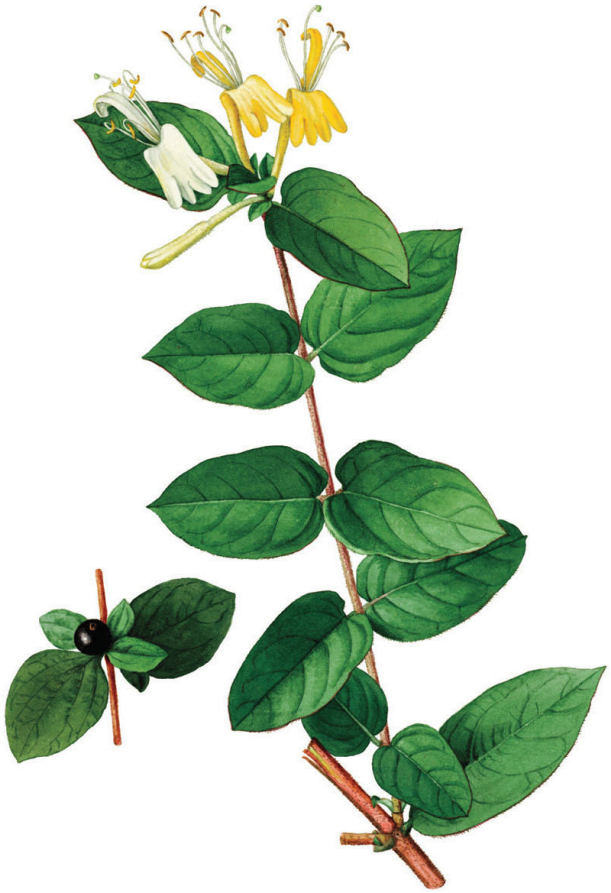
A sweet-scented vine that spreads like wildfire but cools its consumer

The familiar fragrance of honeysuckle blossom permeates country air with nostalgic perfume on a summer morning. Many people over the globe share fond memories of plucking and sucking on the tubular flowers to taste the nectar, sweet as honey, as its name implies. But honeysuckle is far from globally lauded, mainly due to Japanese honeysuckle's creeping and climbing invasion across the Midwest and in the eastern United States.

Originating in eastern Asia, honeysuckle was brought to the United States in the early 1800s as an exotic ornamental landscape plant with added potential for erosion control. Settling confidently into its new territory but lacking the balance of natural pests, honeysuckle vigorously set out to expand its agency. Girdling the life out of young trees, the

vine spirals several feet up into the forest canopy. It also sets its sights on lateral expansion, where it spreads runners along meadows and forest edges, setting roots down every few inches. If left unchecked, the vine becomes a creeping carpet of massive tangles. These dense thickets can block sunlight, prevent germination of other species, and choke out native plants.

Many gardening herbalists invest time in pulling up honeysuckle roots to prevent its inevitable takeover among less aggressive plants. Yet honeysuckle has another means for its prolific spread: Its inedible berries are loved by birds, which spread them abundantly across the landscape. It’s better, perhaps, to learn to love this persistent plant.



THERAPEUTIC USES

A resourceful wildcrafter may frolic along the honeysuckle-lined fence rows and translate a honeysuckle invasion into an abundance of foraging possibilities. Kitchen herbalists pluck the edible blossoms to make thirst-quenching iced infusions in the summertime. Elders in the herbal world pass down recipes for honeysuckle-scented jellies, fragrant fruit salads, perfumed cakes, and aromatic ice cream.

Traditionalists also value the white-to-orange flowers for medicinal tea. The blossoms with their attached leaves may be gathered and dried for the winter months, when they will come in handy as a tea for winter maladies. The pleasant-tasting tea or tincture lends an uplifting slant of optimism to seasonal blues and allays anxiety.

An infused honeysuckle blossom honey or syrup, drizzled on desserts or taken by the spoonful for coughs and sore throats, is a delightful way to enjoy this feel-good medicine. Clinical herbalists refer to Traditional Chinese Medicine, in which honeysuckle enjoys a long-established reputation for the treatment of fevers, flu and cold, pneumonia, and bronchitis. Research studies in Asia point to the antiviral, antibacterial, and hypolipidemic, or cholesterol balancing, value of honeysuckle extract.

Honeysuckle’s trumpet-like flowers have a cooling, anti-inflammatory effect inside and out, and were traditionally used topically on syphilitic outbreaks. Japanese honeysuckle infusion can be added to a bathtub for all-over soothing, or used as a healing wash for skin irritations, infections, and rashes. A towel soaked in this chilled liquid can be nurturing to a hot headache or soothing when applied to tender, sunburned skin. A wet poultice or mist of this antiviral floral infusion pacifies painful herpes blisters, shingles rashes, and chicken pox lesions. Taking a relaxing honeysuckle bath while sipping on a favorite tea of a nervine such as lemon balm can refresh the mind, ease redness, and chase away melancholy.

A basket woven from honeysuckle vines

Honeysuckle Basket Weaving

When faced with the challenge of invasive species, crafters of all kinds are wise to come up with clever ways to use these abundant resources. One patch of honeysuckle, for instance, can provide several coils of the perfect starting material for basket weaving. The weaver who works with honeysuckle enjoys a great degree of artistic versatility as the younger vines are cord-like and pliable, while the older ones are rope-like and gnarlier. Honeysuckle with a brown flaky bark lends a rustic look to a basket, while peeled vines showcase a classic creamy-white undertone. Innovative Cherokee artisans who work with honeysuckle honor traditional time-tested techniques by using newly available materials to create striking and functional works of heritage art.

{ Japanese Knotweed }

Genus and Species: Reynoutria japonica
Family: Polygonaceae

A rampant invasive with powerful roots and shoots

Japanese knotweed is a prime example of a beloved and hated invasive species. Native to Japan and China, Japanese knotweed was introduced into the United States as an attractive garden ornamental in the early 1800s. Now deemed a noxious weed in many areas, Japanese knotweed grows prolifically throughout North America, unsubdued by competition or natural enemies. Its seeds travel downstream, allowing it to confidently establish itself along river corridors. Dense colonies choke out other vegetation and decrease the available animal habitat of an area. The knotty root networks of this tenacious weed are so strong that they can even damage foundations and undermine established buildings.

Because Japanese knotweed is very difficult to eradicate, it's best not to intentionally plant it. As an abundant

resource, wild stands of it can be harvested freely—one way of controlling its spread. Japanese knotweed emerges in the spring as an asparagus-like shoot shaded green and dotted with hints of scarlet. Reminiscent of bamboo, it grows tall quickly through the seasons, taking on a multijointed appearance along its hollow cane. By midsummer, Japanese knotweed stems turn woody and may reach 10 feet (3 m) in height. Large clusters of drooping white flowers emerge as the plant matures.

THERAPEUTIC USES

Fans of Japanese knotweed laud its many desirable medicinal and edible qualities. Wildcrafters covet the tasty spears and potent roots. Its tender reddish-green shoots emerge early in the season before turning woody and are ideally cut when still under six inches (15 cm). During the springtime, these can grow more than an inch (2.5 cm) a day, so the critical window of harvest when both spears and roots are at their most medicinal is narrow.

As a ubiquitous wild edible, Japanese knotweed packs a stronghold of nutritional power. It is very high in vitamin A and C and contains a substantial source of antioxidants. Japanese knotweed is a source of commercial resveratrol, a beneficial polyphenol commonly sold as a dietary supplement. Resveratrol has been associated with the prevention of Alzheimer’s disease, cardiovascular disease, and cancers. It also has been shown to have blood thinning properties that reduce the likelihood of blood clots, while preventing any vascular permeability associated with edema and swelling. Additionally, Japanese knotweed is an important source of the compound emodin, a natural laxative, and has been used to gently stimulate the bowels.

Recently, significant scientific and anecdotal interest has focused on Japanese knotweed in the fight against Lyme disease. This plant seems able to stimulate blood flow to the minute capillaries of the eyes, joints, skin, and heart tissue, where harmful spirochete bacteria carried by Lyme tend to live. This indication is mirrored in its long history of use in Traditional Chinese Medicine, where it is considered to invigorate movement in the blood, dispelling stagnation and draining toxins.

The edible young sprouts of Japanese knotweed

Wild Foods Sauté

A wild foods sauté can be a delicious way to enjoy savory edibles such as Japanese knotweed shoots, weedy greens, freshly picked mushrooms, and tender roots. Sauté, from a French word meaning “to jump,” refers to the cooking method of heating food quickly in a shallow pan using a small amount of oil or butter. It’s a method perfect for a campfire meal, a post-hike snack, or a nutritious side dish and a good way to enjoy some of the health-giving benefits of foraged treats including Japanese knotweed spears, stinging nettles, and burdock roots. One advantage of sautéing these foods in oil is that the fat-soluble vitamins they contain, such as vitamins A, D, E, and K, will be more easily absorbed by the body.

{ Kudzu }

Genus and Species: Pueraria montana
Family: Fabaceae

A quick-climbing vine with candy-like blossoms and restorative roots

Introduced as a species well suited for erosion control from Japan into the United States as part of the Philadelphia Centennial Exposition in 1876, kudzu wasted no time in making a name for itself. The lush, fast-growing vine enchanted American gardeners because of its ornamental value and use as a forage crop, among other reasons. The U.S. government even offered incentives for farmers to plant kudzu to prevent road erosion. Devoid of competition or pests, kudzu spread and became known as the “plant that ate the South.”

During an average summer day, kudzu’s fuzzy vines can grow as much as a foot, speedily climbing trees, power poles, and anything else it touches. Aggressively invasive, it can destroy large tracts of habitat in a single season. There are now coordinated attempts to control its rampant spread,

but this stubborn vine is anchored by incredibly deep taproots and spreads voraciously via massive rhizomes and runners.

Yet kudzu is a paradox not without its redeeming features. It blooms during the summer into elongated clusters of gorgeous grape-scented flowers that range from pink to purple or red. The delicious nectar of these succulent blossoms is followed by hairy pea-like seedpods. The seeds can lie dormant for years, giving rise to new plants when least expected. Kudzu’s widespread availability has made it ready material for crafters, who use its fibers in basket-

weaving, paper-making, cloth production, and even new construction.

THERAPEUTIC USES

Southern households can make the best of an invasive situation by learning to use the edible and medicinal flowers, leaves, and roots of kudzu, which is recognized as a traditional medicinal in the Asian countries where it is native. The young leaves are a nourishing green that can be juiced, eaten raw in salads, or cooked up spinach-like with other greens. The sweet flowers are wonderful in an infusion and can be crystallized for pastry decorations or batter-dipped and fried into fritters, a true wild southern delicacy. The aromatic fruity-floral blooms can also be creatively used to flavor recipes including jellies, jams, ice cream, syrups, infused honeys, and vinegars. The starchy roots are popular in Asian cuisine as a thickening agent.

In addition to its culinary versatility, kudzu has tremendous medicinal benefits. Chinese studies link kudzu to welcome effects on the circulatory system, catalyzing positive outcomes for the heart and protecting the brain and nerves from toxins. The deeply anchored root echoes kudzu’s use in helping people center and stabilize in the midst of dizziness, migraines, vertigo, tinnitus, and even hangovers.

Research demonstrates that kudzu root can help curb alcohol cravings, and extracts of kudzu flower are being studied for their potential in promoting weight loss. Many of kudzu’s healing qualities have been traced to its high content of isoflavones. These important food nutrients have been associated with protection from breast and prostate cancer, menopausal symptoms, heart disease, and osteoporosis. Kudzu can be taken daily by mixing a spoonful of the powdered root into smoothies or cereals.

Alternatively, a decoction of kudzu root can be consumed regularly for its health benefits.

Chunks of kudzu root

Kick the Habit With Kudzu

Consuming a little kudzu might be worth considering prior to a night out drinking. The root has been successfully used by social drinkers hoping to cut back on alcohol and temper drinking habits. Early evidence points to the use of kudzu in Traditional Chinese Medicine to cope with the aftereffects of drunkenness and hangover. More recently, researchers have theorized that drinkers who take kudzu prior to imbibing may actually drink more slowly and consume less overall. It appears that kudzu not only helps curb cravings but also can help break down the toxic byproducts of alcohol metabolism, leading to a more enjoyable morning after.

{ Mimosa }

Genus and Species: Albizia julibrissin
Family: Fabaceae

An otherworldly pink blossoming tree with a penchant for happiness

Puffs of hot pink blossoms explode like fireworks upon this Asian tree on late summer days. By night, the delicate fern-shaped leaves gently fold up as if asleep. The mimosa, or silk tree, is a fast-growing small-to-medium tree that graces many lawns as a stunning ornamental. The appealing vase of its silhouette, its feathery leaves, and its low, shading branches make it a soothing sight within a landscape.

Mimosa's bark is a pale gray-brown and smooth to the touch, although textured with pores. Singular one- or two-inch (2.5 to 5 cm) blossoms are actually dense clusters of many flowers, each containing bunches of ombre, pinkish-white strands arranged in a bouquet of inflorescence. Later, handfuls of leguminous paper-colored bean pods develop

and hang down. Each pod houses 5 or 10 inedible seeds that are dispersed via wildlife and waterways.

Having escaped cultivation, the opportunistic mimosa grows wild in various soil types along roadsides, forest edges, vacant lots, and stream banks. Mimosa originated in Asia and the Middle East and can now be found throughout the Midwest and the southern United States, on both coasts, and up toward New York. In much of its adopted habitat, the mimosa tree is an invasive tree capable of displacing native species and disturbing woodland communities.

THERAPEUTIC USES

Harvesting mimosa is akin to collecting tufts of herbal bliss. The mimosa tree is prized for its nectar-scented flowers and

medicinally rich inner bark; it is revered as the “tree of happiness” in its home territory of China. Within this tree’s doctrine of signatures, there are many hints in its appearance that allude to its uses for uplifting mood and spirit. Its soft, carefree flowers with their sweet aroma seem to suggest an expression of lightness and buoyancy of the emotional heart. Indeed, in Traditional Chinese Medicine, mimosa flowers are given to those suffering from grief or constrained emotions as a way of lightening their burden. Mimosa blooms, leaves, and inner bark all yield a pacifying effect on heartache, soothing the spirit in times of loss.

The beautiful blossoms can be infused into sun tea or crafted into a tisane blend for a beverage that delights and enchants. Delicate mimosa leaves are edible and can be added to an herbal tea blend or to nourishing soups to aid those convalescing from mourning. The astringent, tissue-toning bark is used medicinally by herbalists as a tincture or decoction. An infused honey of mimosa blooms makes a charming gift sure to bring a smile to those who enjoy its floral juiciness.

One theory holds that because mimosa relaxes smooth muscle, it has the ability to calm spasms in the lungs. Another effect it seems to have is stabilizing mast cells, which influence the immune system by releasing histamines into the body. More stable mast cells are less easily triggered by allergens and release smaller amounts of histamine, resulting in lessened allergic responses. Mimosa may therefore be useful in formulas for preventing allergic over-sensitivities. Both the flowers and the decocted bark calm asthma and halt histamine-related flares. An infused vinegar of mimosa can also be taken daily as a tonic to help with hay fever and allergies. A bark powder or poultice of the fresh flower can be applied topically to mellow the expression of triggered inflammations like eczema.

The summertime blossoms of mimosa trees

Mimi’s Mimosa “Mimosa”

To make Mimi’s Mimosa “Mimosa,” first prepare an infused simple syrup of fresh mimosa flowers by adding one cup of sugar to one cup of simmering water in a small pot. Stir until all the sugar has dissolved, then remove the mixture from heat and stir in several handfuls of fresh mimosa blossoms. Cover and allow the blossoms to infuse as the syrup cools for about two hours, then strain and refrigerate until adult cocktail hour. Prepare the drink by blending a chilled bubbly beverage of choice with one ounce of mimosa-infused simple syrup, or to taste. Garnish with a floral sprig. Cheers and happy smiles to follow.

{ Mullein }

Genus and Species: Verbascum thapsus
Family: Scrophulariaceae

A fuzzy biennial to heal and protect the respiratory system

Regal mullein reigns over the roadside with its statuesque stalk of yellow flowers reaching elegantly sunward. Mullein is a classic biennial, taking two years to fulfill its life cycle. During year one, thick grayish-green leaves form a basal rosette, arranged in a circular pattern and hugging the ground closely. Mullein's enormous leaves are textured impressively with felt-like softness. Mullein overwinters into its second year, when it shoots up a hairy towering wand densely lined with yellow blossoms. After its flowering period has subsided, the mullein stem becomes brittle and brown and disburses a prolific number of seeds. The next spring, the dead brown stalk is a good indicator of first-year plants that have seeded nearby.

In many regions, mullein is considered a prolific weed often found in sunny disturbed areas, perched on rock ledges, in open fields, and dotting hillsides. Mullein leaves, flowers, and roots are all useful and quite easy to harvest. The individual leaves can simply be snipped off at their base and placed in a basket. The delicate flowers can be plucked one at a time with fingertips. It is not advisable to cut down the full stalk at once because the flowers blossom at various times and each summer day will bring new harvestable blooms. Mullein roots are shallow and easily pulled up with a shovel or other digging tool, or even by hand if the soil is loose.

THERAPEUTIC USES

The flowers of mullein are flavonoid-rich, and its leaves are cooling and demulcent, or softening and palliative. Taken as an infusion or tincture, mullein leaf stimulates expectoration, thus remedying congested lungs by releasing and bringing up stagnant mucus. To this end, it is commonly used to treat bronchitis, whooping cough, pneumonia, and sore throat. Recovering tobacco smokers even find mullein smoke to be cleansing and healing to the lungs. Dried mullein leaves have been used for generations in herbal smoking blends for their smooth flavor and bronchial clearing activity. Inhaling mullein leaf smoke can soothe and quiet a cough for the seasoned smoker. Mullein has historically been given as an antitussive to tuberculosis patients. Its action against the mycobacteria that cause tuberculosis and leprosy is actively being put to the test beneath the scientific lens.

Mullein leaves are unusual in that they possess a soothing mucilaginous effect balanced with astringency, a dual quality that heals irritated and raw surfaces while also reducing bleeding. Because of this power, mullein can be applied as a topical poultice for hemorrhoids, cuts, and skin abrasions.

The flowers of mullein also have profound medicinal activity. Traditional herbalists make the classic combo of a garlic-mullein ear oil to ease the pain and inflammation of earaches and infections. The flowers exhibit a gentle antimicrobial and antifungal activity that assists in fighting off infections and are specifically therapeutic to the ear area. A simple fresh mullein flower tincture is one of the best remedies for a dry and ticklish cough. But caution should be taken to prevent aggravating a throat tickle with mullein leaf infusion, which must be carefully strained to avoid irritation from the minuscule hairs that coat the herb’s surface.

Yellow flowers atop mullein’s tall stalks

Mullein’s Healing Smoke

To prepare mullein leaf for a smoking blend, start with fresh first-year leaves. Remove their thick and juicy midribs using scissors, so the leaves dry uniformly. Lay the leaves on a drying screen and let them remain until mostly dried, turning and rotating as necessary. Like tobacco, mullein leaf will retain a better flavor if it is slightly moist. Some herbalists may dry mullein leaf all the way and then add a fresh sliver of apple to it to give it a little moisture. Dried mullein leaf should then be shredded with shears and rubbed between the fingers to fluff it up before rolling it into an herbal smokable using a paper of choice.

{ Purple Loosestrife }

Genus and Species: Lythrum salicaria
Family: Lythraceae

A swift spreader with major ecological implications

Purple loosestrife's intercontinental journey likely began as a seed plastered on the ballast of a European ship in the early 1800s. Imagine it: As the boat approaches the shore, this tiny seed breaks loose and floats in a brackish estuary. It settles into a marshy area and germinates, growing into a tall angular stem bearing multiple flower spikes. Every year its perennial woody root mass spreads farther, sending up more stems. Arrow-shaped leaves reach up toward the sun, the plant's energy pointing vertically through multiple flowering stalks as it releases upwards of three million seeds. This massive host of seeds embarks on yet another adventure, carried by water to new sites and putting down roots.

Leaving its home community behind, purple loosestrife has naturalized throughout North America and continues proliferating in a land where it has no biological controls and few pests to keep its growth in check. Its aesthetic beauty entices those who see it on their travels and decide to plant it in their own gardens, only for it to begin its rampant spread again in a new neighborhood. Designed for survival and thriving, it spreads vehemently by rhizome, seeds, and even cut stems and bits of root, which eventually form vast monostands that legendarily take over certain landscapes. Native plants and the amphibians, birds, and mammals of

the wetlands that eat them must all adjust to the purple loosestrife takeover.

The wildfire creep of this spectacular wild plant has brought it to now inhabit wetlands, marshes, riverbanks, flood plains, and ditches across the United States and Canada. A joyful sight to the unaware, angst-provoking for the ecologist, purple loosestrife's redemption to the pragmatic herbalist is as an abundant medicinal resource available in both its native and naturalized territories alike.

THERAPEUTIC USES

Described as antibacterial, astringent, and mucilaginous, purple loosestrife has a history of use as a curative for maladies of the eyes. The infusion is reputed to be an eyewash to clear and cleanse the eyes while soothing the sensitive membranes. Its balancing qualities are capable of drying out excess discharge at the same time as moistening dry tissue. This demulcent/astringent combination, along with this herb's antifungal activity, makes purple loosestrife an excellent infusion or topical treatment for skin inflammations as a poultice or sitz bath. As an astringent, it helps to staunch bleeding and can be used as a rinse for irritated gum tissue. This hemostatic quality, coupled with its viscous and soothing nature, can also be helpful in the alleviation of ulcers. Historically, purple loosestrife was noted as a reliable folk aid for dysentery, diarrhea, and cholera outbreaks of the 1800s. Contemporary herbalists use it to ease irritable bowel syndrome.

The tea of its leaves and flowers has a clean grassy taste and can be consumed regularly for both pleasure and optimal health. Taken as a tea, the herb can help in situations of excess mucus while simultaneously cooling the pain of inflammation. These attributes make it an ideal tonic for urinary tract and respiratory disorders. Research points

toward purple loosestrife as possibly hypoglycemic—balancing to the blood sugar—and hepatoprotective—guarding the liver from toxins.

Loosestrife blossoming in the wild

Environmental Enemy or Reparative Restoration?

Wetland ecologists share concerns over the colonizing habits of purple loosestrife and its detrimental effects on native habitats. Not only has the invasive plant affected the food chain by edging out various plants and the animal species that rely on them, but it also seems to impede water flow and increase sediment in areas where it takes hold. Yet there is a positive aspect of its biological effect. Purple loosestrife may play a useful role as a phytoremediator, a plant that removes contaminants from the soil and water and breaks them down into harmless components. Optimistic nature lovers point to this plant's ecological restoration potential as a sign of the earth's innate capability of self-healing.

{ Yellow Dock }

Genus and Species: Rumex crispus
Family: Polygonaceae

A common field weed and impressive liver and blood tonic

Yellow dock is most obvious in the fields of late summer when its stalks, laden with rust-colored sheathed seeds, catch the eyes of roadside passersby. Early in the spring, yellow dock makes its first appearance via a basal rosette of wavy, dark green lance-shaped leaves. As a biennial, this curly dock (another of its common names) takes two years to reach flowering maturity. In the spring of the second year, the base gives rise to roughly textured leaves and a stalk studded with numerous clusters of whorled small flowers dangling in shades of light green to pink.

A member of the buckwheat family, fruit-studded yellow dock has a grain-like appearance similar to wheat. As these fruits yield seeds, the reddish-brown sepia-toned seed heads allow the stalks to gain centerpiece status in autumn floral

arrangements. Left to their own journey, winglike husks allow the seeds to be dispersed by the wind to faraway places.

Yellow dock is one of the most widely traveled plants in the world. Its origins trace back to Europe, Asia, and northern Africa, but it has circulated the world as an introduced species. In the herbalist’s garden it pops up as a common weed, often welcomed for the medicinal properties of the root and the early tender leaves perfect for nibbling. The young spring greens of yellow dock are slightly bitter and sour but edible in moderation when blanched. Older leaves have an abrasive mouth feel and contain oxalic acid,

so are not recommended for those with a history of kidney stones. The seeds are used by both creative kitchen herbalists and wild foods enthusiasts. They can be finely ground to make a nutritious coffee substitute or used as a fiber-rich supplement in baking muffins, crackers, or breads.

THERAPEUTIC USES

The carrot-shaped taproot sports a characteristic burnt-gold color, which originates from a modest presence of anthraquinones, a compound which is present in greater amounts in herbs known for their laxative activity, including cascara sagrada, aloe, turkey rhubarb, and senna. Yellow dock roots are gently stimulating in comparison, but similarly known for giving the bowels a nudge. Yellow dock root is deeply nutritive and has a reputation as a tonic for improving iron assimilation. Herbalists rely on a decoction of roots for addressing blood depletion in cases of anemia.

In herbalism, yellow dock root is considered an alterative, something to turn the course of an illness for the better, reinstating a sense of well-being by virtue of supporting elimination, purifying the blood, and helping the body to shed toxins. As a bitter-tasting cholagogue, it can support the liver’s bile production. This action, coupled with its effect on bowel regularity, is said to prevent the recirculation of bile and minimize toxicity. Its most notable effects are evident in improved skin appearance, joint health, and, for many, optimized vitality. For hepatobiliary support in cases of jaundice, cirrhosis, or hepatitis, yellow dock is often combined with liver and gallbladder-supportive herbs such as dandelion root or burdock. Yellow dock is ideal for conditions associated with chronically scaly skin in which sluggish liver and constipation seem to be the cause.

A close-up of the flowers of yellow dock, related to buckwheat

An Old-Time Iron Tonic

An herbal iron tonic is one of the most common folk remedies used by Western herbalists and midwives. Yellow dock and dandelion root compose the foundation of this old-time medical recipe not only for their iron content but also for their supportive liver action, which allows the tonic to assist in iron uptake. Nutritive herbs like nettles and burdock root are often included for additional synergy and potentiating power. This treasured remedy is made by combining a rich decoction of nettle leaves and chopped roots of yellow dock, dandelion, and/or burdock with iron-rich blackstrap molasses to make a dark, viscous syrup convenient for taking daily.

HERBAL HERITAGE

The Celtic Herbal Tradition

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Many of the most common plants we see outside our doorsteps are descendants of Celtic medicinal herbs. These weeds were woven as sacred symbols throughout the history of native European land via ancient lore and medieval herbal legends of the Celtic culture. Storied accounts of herbs such as dandelion, plantain, yarrow, nettle, and burdock were passed down through tribal healing traditions united by a common thread of language, art, and mythos.

Multiple tribes composed this culture of magic and mythology, including the clans known as Druids, unified by a common priesthood. Oral traditions were used to teach the people to honor memory and keep traditional knowledge in the proper hands, a practice considered paramount. Storytellers, sometimes called bards or *seanchaí,* were respected and underwent intensive training. Their stories were grounded in nature and served to educate and unify the people, historical records as much as entertainment for the long nights of winter.

Much of the context of Celtic herbal traditions was subsequently passed along through written records of the region’s Roman and Greek colonizers. Historical details gleaned through archaeology show the Celts to be a strong community. They stored grain crops such as wheat, spelt, and barley in underground silos, kept seeds and herbal

honey meads in clay pots, and dug wells to keep the sacred waters flowing.

HERBAL MYTHOLOGY

The Celts intentionally wove the spirit world, physical world, and the otherworld (or underworld) into their healing practices, ceremonies, rituals, and daily life. Mythical creatures from giants and dragons to faeries, ogres, leprechauns, and elves showed up in each story and just around every corner. Color, magic stones and crystals, incense, and the lunar calendar were all included in the thoughtful habits and practices of daily life.

A marginal illustration portrays a lesson in useful plants, from a 13th-century French herbal derived from the work of Galen, a second-century Greek physician.

The Celtic origin story of herbs is told in the folkloric tale of a family of healers. The divine physician Dian Cécht had two children: a son, Miach, and a daughter, Airmed. Both were gifted healers, Airmed with the gift of medicinal herbs and Miach with the gift of healing alchemy. After the two siblings restored health in the arm of a favored warrior, Dian Cécht was overcome with a fit of jealous rage and killed his son. Airmed, weeping inconsolably over her brother's grave, was gifted hundreds of healing plants from the veins and joints of the beloved deceased. She devoted her life to cataloging these herbs until, in another spell of envy, her father scattered the plants to the four winds so she could not complete her inventory task. According to this myth, to this day there exist plants with powerful healing properties that have yet to be documented.

DRUIDS AND THE TREES OF LIFE

The ancient order of the Druids (*dru* meaning "truth") was a learned elite committed to a life of cheerfulness, temperance, and exercise. They were also the keepers of healing plant medicine and sacred herbal rituals. Sweathouses, medicated baths of herbs and milk, infused oils for anointing, sacred stones, and food-based nourishment were among the many healing modalities in their medicine bundles. Druids were likewise the keepers of ceremony and held the ability to conjure up a variety of psychic phenomena, in addition to physical remedies, to aid health. In antiquity, it took many years to become initiated into the Druid order.

The Druids revere trees as mentors of secret knowledge and sources of medicine and survival. Celtic symbolism and community thrive around a central tree of life. The oak rules summer and is the tree of strength, while the holly, the tree of love, keeps people close together in winter. The rowan

tree, *Sorbus aucuparia,* is immortalized to this day in traditional Scottish folk songs and lore throughout Europe. Common in the highlands of Britain and Scotland as well as Ireland, the rowan tree is revered for protection, and its berries are used to make spirits, ale, mead, and wine. Willow, elder, yew, and linden are among the many other sacred Celtic tree medicines still used frequently.

In this late 19th-century painting, Druid priests and priestesses ceremonially harvest the sacred mistletoe as part of their celebration of the winter solstice.

THE ANCESTRAL PATH

Celtic pagan beliefs in the healing powers of the natural world are alive today, weaving together the ideas that all life is sacred and that magical realms flourish. Regions of western Europe known as the “Celtic fringe” include Ireland, Brittany, Scotland, Cornwall, the Isle of Man, and Wales. The people of these areas place a strong emphasis on preserving the Celtic language and identity. Many descendants from these regions honor their ancestry by abiding by the natural rhythms of the seasons in their celebrations and respecting the old medicine ways in their practice of herbalism. The use of the most revered medicinal trees and plants, which have been a part of human experience for centuries, is relevant today in the living legacy of Eurocentric folk herbalism. As Celtic herbalist Keith Robertson reminds us, “If the plants are our teachers, how much time do we devote to sitting with them?”

Herbs Valued in the Celtic Tradition

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DANDELION
Taraxacum officinale

GROUND IVY
Glechoma hederacea

MUGWORT
Artemisia vulgaris

PLANTAIN
Plantago major

SELF-HEAL
Prunella vulgaris

. . . . . .

7. Woodland Herbalism

AMERICAN GINSENG
BLACK COHOSH
COTTONWOOD
ELDER
GOLDENSEAL
JUNIPER
RAMPS
SAW PALMETTO
SLIPPERY ELM
SOLOMON’S SEAL
WITCH HAZEL

Blooming wild garlic blankets the floor of a beech forest in Germany's Eifel Mountains.

Along the Sylvan Path

Herbalists recognize that a stroll along a wooded path is a blissful antidote to the stress and overstimulation of modern-day life. Whether soaking in the meditative mist of the wood's edge or forest-bathing deep within a mountain cove, fostering

comfort within the diverse splendor of the natural environment is the simplest way to harness nature's medicine.

In Japan, the experience of forest bathing, or *shinrin-yoku,* is promoted for myriad health benefits. Spending unstructured time in the woods can settle the nervous system, boost immunity, and calm the mind.

The woodland wanderer knows that time among the trees elicits a heightened sensory awareness. The herbalist is wise to pause in admiration of the sacred geometry of plants and to soak in the simple stimulation of the wilderness. As the breath becomes mindful, there is greater awareness of airborne notes like the sweetness of cottonwood nectar permeating a cool breeze.

The healing heart tunes into the music of the forest, from the dry rattle of black cohosh seed stems to the crackling projectile pop of the witch hazel seed. The herbalist's posture stands tall like a juniper tree, inspired to live fruitfully. The sensory impact in the forest elicits awe and instills a knowledge of presence and peace in the vast web of life.

WISDOM OF THE SEASONS

Year after year and generation upon generation, humans revisit the wooded path, taking heed from the collective wisdom of the ancestors and reinforcing bonds with familiar plant allies. The allure of nature's cyclical rhythm keeps the herbalist in a state of expanding wonder and anticipation of seasonal surprises.

While this chapter focuses mainly on the microcosm of southern Appalachia—said to host some of the greatest botanical biodiversity on Earth—this native North American timberland mirrors a similar story to every woodland around the world, including rainforests, jungles, and temperate

forests. Within the specifics of the storied narrative of American ginseng and the superfood stardom of elderberry, we see a universal theme of a call to conservation.

A rare woodland find: pink lady's slippers, long ago harvested as medicinal but today recognized as critically vulnerable

Whether it’s the dappled early spring sunlight of a forest cove giving way to an ephemeral carpet of spring blossoms, the verdant peak of summer’s flourishing along a streambed, or autumnal inspiration as the forest flora begin turning in for the season, the cycles of plant life serve as a reminder of our inner circadian relationship to the earth. Humans, too, unfurl like spring shoots. Humans, too, lighten into a playful mode like the graceful clouds of cottonwood tree fluff in summer, and return in fall to our own roots deep within the ground.

Elderberries spill out of a basket.

ETHICAL, LEGAL, AND SAFE HARVESTING

Gathering solace from the forest does no harm, but harvesting native plants from their natural habitat is not always appropriate and may even be considered illegal poaching. Ethical harvesters take care to comply with

regional guidelines associated with taking plants from both public and private land.

In many areas, harvesting of native plants is closely monitored by regulatory agencies and may involve fines, permits, and seasonal oversight. Native plants are often subject to competition from invasive plants and habitat loss due to development and clear-cutting. Concerns with overharvesting many native woodland plants are grave and growing.

Many herbalists avoid the use of wild native plants with questionable sustainability, favoring those that grow in abundance. An herbalist might, for example, choose the weedy garlic mustard in place of sensitive ramps for kitchen recipes calling for wild leeks. Or they may prefer to substitute other mucilaginous herbs found in greater abundance, like mullein leaf or flax seed, for slippery elm, whose population has been impacted by disease.

All the plants in this chapter are native (although not always exclusive) to American forests. They are presented here not to promote their usage but to introduce their stories, so readers can better appreciate the lore and lineage of medicine and emerge with greater understanding of these woodland treasures.

Herbalists who don’t share an ancestral heritage with certain rare plants are wise to leave them in the wild as a sign of respect. In addition, herbalists who do forage in the wild are extensively mentored in botanical plant identification. Many plants have lookalikes, and some can be toxic or even deadly. The reader should note that this book does not relay the level of expertise necessary to harvest wild plants, and aspiring foragers should consult local botanists.

WILD-SIMULATED

Another sustainable option is to source woodland herbs that have been intentionally forest-grown, thereby easing the demand on wild populations. In Appalachia, for example, a tremendous amount of education and research has gone into teaching land stewards best practices involved in the shade-driven production of wild-simulated ginseng, goldenseal, black cohosh, and ramps.

Botanical conservation values are carefully balanced with a reverence for Indigenous medicinals. These important, nontimber forest products have a heritage of income-generating potential for mountain folk of many regions. Consumers can become more self-sufficient by growing a stand of elderberry shrubs or planting Solomon’s seal in their shady garden spots. Earth stewardship includes the cultivation of medicinal plants and restoring ecological balance to native woodlands.

Harvesting the flowers of bee balm

WEB OF LIFE

The forest is an ecological system of resilience relying on the mutual relationships among a vast array of organisms. Thousand-year-old saw palmetto shrubs shelter rattlesnakes with their palms and feed bears with their nutrient-dense

fruits, all while enticing hundreds of native pollinators with their floral nectar. Bees industriously masticate cottonwood bud sap to produce the protective substance called propolis for their hives. Black cohosh is the sole source of food for the larvae of the Appalachian azure butterfly. Large mammals, including deer, elk, and antelope, forage berries from Solomon’s seal, elder, and juniper, the latter of which hosts a microscopic home for wild yeasts. All these interconnections are more reasons to respect the woodland herbs. The delicate balance of these elements supports a thriving forest; none are unlimited resources to exploit.

{ American Ginseng }

Genus and Species: Panax quinquefolius
Family: Araliaceae

A two-legged root known as king of the herbs

Nothing conjures up the aura of folk medicine lore as much as the legendary forked American ginseng root, with its twisted humanoid appearance. From southern Appalachia north through Canada and across the cooler regions of North America, the elusive wild ginseng faces endangerment via overharvesting, land development, and loss of habitat.

For the digger, or “sanger,” of this precious root, the wildcrafting life is big business, complete with brokers and global trade, poachers and security cameras, and regulations and steep fines. Most contemporary herbalists have never and would never harvest a ginseng root from the wild, opting instead for farm- or forest-cultivated, or wild-simulated, roots. Many others simply consider using a different, more abundant, herb. In the case of Asian ginseng, overharvesting has sent the wild plant into a state of near-extinction, forcing any commercial sale of the herb to be based on cultivated roots. Encounters with ginseng in the wild are thus best kept low profile. Ideally, herbalists who don’t share an ancestral heritage with this plant are wise to

leave it be. Regulation-abiding harvesters follow specific best practices with regard to age of the root, seasonal restrictions, and seed dispersal to ensure future years of sustainability. Even then, the slow-growing roots take years to come of age.

Ginseng's morphology is one of the features that make it such a storied plant. To the trained eye, the age of the root is discernible through careful examination of what is called a "stack of pancakes," bud scars visible just underneath the soil. Above the ground, ginseng appears in springtime, manifesting as one main stem that branches out into multiple prongs, which also provide visual cues about its age. Each leaf prong typically supports five toothed leaflets (as ginseng's species name, *quinquefolius,* indicates), two of which are significantly smaller than the others.

Greenish-white flowers form in the summer and become crimson red berries. Later in the fall, ginseng leaves fade to a golden yellow and wither away. Scattered seeds await the stratification of a hard winter before they germinate. It could take up to 12 years for a plant to become fully mature.

THERAPEUTIC USES

The flavor of ginseng is distinctive and can be described as bitter, sweet, woody, and amber-scented. To many herbalists, the root medicine exudes a soft, moistening, warm, and nourishing energy. It is often compared to Chinese ginseng *(Panax ginseng),* but the American variety is notably cooler and somewhat less stimulating than its notoriously energizing Asian relative.

Ginseng has long been considered a longevity-building tonic for elders. Small sips of the root decoction, soup, or elixir are taken to counteract mental and physical fatigue. Small doses of American ginseng may be helpful during periods of frailty and convalescence from cancer or

infection. It is deeply supportive for the endocrine system, where it can help replenish energy. This quality can sometimes feel overstimulating and contribute to burnout and insomnia, especially in combination with other stimulants like coffee. But for someone with a dry and depleted constitution, relatively common in elders, ginseng offers immune support, kick-starts sluggish digestion, and revitalizes a weary reproductive system.

The gnarly root of American ginseng

Wild-Simulated in West Virginia

West Virginia considers its wild ginseng to be a native Appalachian treasure worthy of protection. Residents there balance their botanical conservation values carefully with a reverence for ginseng as an age-old harvest important for economic survival. Digging, growing, selling, and exporting ginseng are all regulated in the state, where ginseng root is classified as wild, wild-simulated, woods-grown, or cultivated. Ginseng experts are now investigating medicinal uses of the plant’s leaf, berry, and flower bud, which

contain similar active constituents as the root, as a way to offset demand for the root itself.

{ Black Cohosh }

Genus and Species: Actaea racemosa
Family: Ranunculaceae

A beloved woodland botanical wise in the ways of reproductive health

After a long winter in the rich coves of eastern North American woodlands, springtime ushers in remarkably thick black cohosh shoots unfurling from knobby masses of dark rhizomes. As the forest floor gives way to an ephemeral carpet of spring blossoms, the deep purple emergence of black cohosh stretches its trifoliate leaflets into a broad horizontal pattern of verdant feathery teeth and lobes.

Midsummer elicits a slender, elongated, and often branching inflorescence called a raceme, characteristic of the epithet of this species, *racemosa.* Along this axis, small stalks called pedicels bear green flower buds the size of peppercorns. At the height of summer, they give way to creamy white blossoms that erupt vertically along the stem

and are profuse with sweet, slightly fetid perfume—an allure to gnats, flies, and native pollinators.

At floral maturity, the plant rises to four to six feet (1.2 to 1.8 m) tall, its fuzzy white wands gracefully bobbing in the breeze above the lush greenery of the black cohosh stand. As the flowers fade into brown seed-filled capsules, late autumn and winter bring the audible rattle of the black cohosh wands (hence its common name “rattleroot”), heard by the attuned woods wanderer on a windy day. The cycle begins anew as cold-stratified seeds germinate and the rhizomes, or underground stems, crawl underground to once again give rise to spring shoots.

An important plant of Native American lineage, cohosh's name derives from an Algonquian word meaning rough, a reference to its gnarly root. Black cohosh is listed on the United Plant Savers Species-at-Risk List, as its populations are sensitive to the impact of significant market demand. Due respect of cultural and wildcrafting ethics should be employed. Efforts are under way to encourage abundant woodland cultivation of the plant to ensure its future survival.

THERAPEUTIC USES

The medicinal roots of black cohosh are scented with earthy musk and flavored with an acrid bitterness. While this combo doesn't make for the most pleasant cup of tea, black cohosh tends to be more commonly dispensed as a tincture diluted in water or juice, or as a dietary supplement these days found on the supermarket shelf.

Black cohosh root is one of the most sought-after remedies in herbal medicine, primarily for support during menopause. It also addresses perimenopausal concerns, including hot flashes, waning libido, vaginal dryness, and bone health. But its uses expand beyond menopause. Black cohosh root is reputed to relieve menstrual cramps and facilitate menses, and it is commonly used by midwives as a *partus preparator* in anticipation of childbirth.

Black cohosh root is often used to ease tension and spasms from an achy back. An herbalist in tune with the subtle nature of black cohosh's form in the woods might take note of the smoothly flowing movements of its lanky flower wands during a gust and associate this metaphorically with the flexibility of the spine in the face of stressors. Similarly, the knotted mass of deeply pigmented rhizomes brings to mind another of this plant's uses, soothing moodiness or melancholia.

Tall blooms of black cohosh

Identity Issues

To the untrained eye, black cohosh has several lookalike plants, and so its identification is nuanced. Caution among mountain root diggers abounds. Historically, black cohosh root supplements have endured a reputation for adulteration, the raw material mixed with plants other than the proper species. The research outcomes on black cohosh are inconsistent, an issue that may have to do with improperly identified root specimens. Researchers confronted with this quandary are actively investigating analytical techniques to ensure proper identification through genetic testing. The dietary supplement industry currently employs Current Good Manufacturing Practices (CGMPs) in an effort to ensure proper identification practices both in the field and in the laboratory, thus ensuring consumer confidence in herbal supplements from reputable makers.

{ Cottonwood }

Genus and Species: Populus spp.
Family: Salicaceae

A sacred balm and resinous tree of the people

Late winter air strikes nostalgia into the heart of the herbalist fortunate enough to share a landscape with the cottonwood tree. Among the first signs of the seasons changing is the unmistakable piney aroma of sweet cottonwood bud resin permeating the cool breeze.

Cottonwood's long, pointy leaf buds are ready for harvest when they are oozing and dripping with sticky red sap. Patient medicine makers anticipate the day after a storm, when they can take advantage of windfallen cottonwood branches, often along streams and rivers, and collect the fresh tacky buds. Seasoned harvesters will choose a cold day to gather the buds, selecting the tips with droplets of resin already seeping from them. As spring approaches and the days get warmer, cottonwood sap flows more freely and the wildcrafting experience becomes messier and stickier.

Several species of this “tree of the people” (the genus *Populus* originates from the Latin for “the people”) are used medicinally in various regions of North America, Europe, North Africa, and Asia. Members of the willow family, majestic cottonwoods are deciduous trees. The leaves are finely toothed and range in shape from triangular to diamond-like to heart-shaped. Cottonwood trees can be either male or female, and while the male tree produces pollen on its dangly floral catkins, it is the catkin (or flowering spike) of the female tree that eventually forms the clouds of downy-tailed seeds that inspire its common name. These free-spirited seeds become airborne, their soft tufts giving the appearance of a fluffy, freewheeling midsummer snowfall.

THERAPEUTIC USES

The vibrant red resin of the cottonwood bud serves as an antimicrobial and antifungal to the tree, built-in protection against disease and infestation. To those who gather the buds, the syrupy sap is a ready first aid remedy for cuts, scrapes, bug bites, and stings, minimizing pain while preventing infection. Cottonwood resin is most often made into a salve, which herbalists term “balm of Gilead,” and dab on abrasions, ulcers, boils, or herpes lesions to expedite healing as well as quell tenderness and inflammation. Balm of Gilead salve enjoys an esteemed reputation as a powerfully anti-inflammatory topical rub for swollen and achy joints, injuries, and arthritis. The balm can also be massaged into the belly to relieve colic or soften menstrual cramps.

Cottonwood bark, leaves, and buds are all rich sources of aspirin-like salicylate compounds. These remedies are known to be analgesic (pain relieving), febrifuge (fever reducing), and anti-inflammatory. As tree resin is not soluble in water, cottonwood tea is less than ideal. Instead, herbalists often make a tincture of cottonwood buds or bark to use for alleviating head and body aches and to bring down a fever. If congestion is centered in the upper respiratory tract, a stimulating and aromatic cottonwood balm is often a first choice for application to the chest and back. Taken internally, the tincture is used by folk herbalists as an expectorant for coughs.

A cottonwood tree

Propolis: How Bees Make Glue

Many describe the indulgent fragrance and flavor of cottonwood resin as sweet and honeyed. It is no coincidence that cottonwood sap is favored by bees. Bees love to chew on the saccharine resin, mixing it with enzymes from their saliva and then blending it with beeswax to produce propolis for the hive. Propolis is sticky “bee glue” that they use to repair, seal, and reinforce the hive, but the waxy substance is so medicinal that it also offers immunity to the resident bees by preventing infection, disease, and infestation. Propolis also offers similar therapeutic qualities to humans when ingested as a tincture or applied as a salve. A spray containing propolis offers relief to a sore or swollen throat.

{ Elder }

Genus and Species: Sambucus spp.
Family: Adoxaceae

A classic flower and berry for ultimate immunity

Enchantment overtakes the wildcrafter who forages for elderflowers and berries. Perhaps it's the beauty of their late spring umbel flowerheads, which are reminiscent of antique-white lace doilies. Or maybe it's the anticipation of revisiting the same beloved medicinal grove to gather clusters of dark red-to-purple berries. Medicine-making herbalists worldwide savor elderberry's delicious remedies and feel nurtured by its dependable seasonal harvests.

The treasured elder refers to the shrubs or small trees of the *Sambucus* genus. Most used in commerce are the European black elders *(Sambucus nigra),* which are larger and more tree-like than their American kin, the elderberry shrub *(Sambucus canadensis)*. Both varieties are marked by a gray textured bark, and when the twigs are broken, they

reveal a soft central pith or spongy interior. Elder grows wild in moist ground and flood plains as well as near streams and along creeks. Groups of elders often form thick hedges along a woodland edge or roadside.

If wildcrafting elderflowers, it is important to be skilled at botanical identification. There are other lookalike plant species with lacy flowerheads, including poison hemlock—which is indeed poisonous. Other plants with similarly toned berries (such as pokeweed) can be toxic as well. Another important harvest tip is to not strip the shrubs of all their flowers. The spring blossoms should be shared with pollinators and left to become berries.

THERAPEUTIC USES

Elderflower exudes a sweet scent and mild flavor that lends itself to summer cordials, spritzers, syrups, and liqueurs. A favorite summer beverage is easily made by infusing delicately plucked blossoms in water to make an elderflower lemonade. An infusion of the flowers consumed while warm makes a potent diaphoretic, eliciting perspiration and helping cool the body. Elderflower is one-third of the classic and reliable trio of herbs that can bring down a fever, along with yarrow and peppermint. Gentle elderflower is an effective cold remedy, clearing stuffiness from the sinuses and expectorating mucus from the lungs.

Elderberries are renowned for their antiviral effects on the common cold and flu. Dark and delicious elderberry syrup has long been one of the most popular herbal remedies on the shelves. Laboratory research reveals elderberry’s ability to disrupt the viral spikes that allow viruses to penetrate cells. Many folks rely on elderberry syrup as preventive medicine against viruses during seasons of immune challenge. Others may shorten the duration of illness and allay symptoms by taking the herbal concoction if they are coming down with something.

Elderberry is similar to other dark fruits such as blueberry and cranberry in that its strongest-acting medicinal compounds seem to be the vibrantly colorful anthocyanin pigments. These compounds are water-soluble, so dried berries can be tossed in a decoction for a flavorful antioxidant-rich tea. Raw and especially unripe berries contain toxic compounds, but elderberries that are cooked or extracted in alcohol or glycerin have proved to be safe. This preparation process can prevent potential stomach upset. The berries also need to be plucked off their stems to avoid any possible toxicity from the twigs and leaves. Many herbalists will freeze bunches of elderberries and later easily pop the frozen berries off with a fork.

Elderflowers in bloom

Grow Your Own Remedies

Concerns over virulent viruses have ushered elderberry into the herbal spotlight. More people than ever are flocking to the market in search of elderberry syrup, lozenges, teas, and more. Cold and flu season often results in shortages of the dried berries in commerce. Herbalists and homesteaders who craft elderberry syrups would be wise to cultivate this plant abundantly. The shrubs not only attract native pollinators but also help contain floodplains and are an appealing part of the native landscape. Fortunately, elders are very easy to start from cuttings or transplant from saplings, so if you have the proper place to grow them, you can establish your own elder stand.

{ Goldenseal }

Genus and Species: Hydrastis canadensis
Family: Ranunculaceae

A coveted woodland medicinal containing many remedies in its root

Dappled early spring sunlight in a woodland cove inspires the unfolding of two deeply lobed, maple-shaped goldenseal leaves from a fuzzy, green-to-burgundy ombre stem. The leaves appear wrinkled, thin, and slightly hairy as they settle into their respective arches. Later, when the canopy fills in, goldenseal's leafy greenery deepens and its texture becomes smooth. It reveals a small petal-less flower as its leaves outstretch in early spring. Perched slightly above the foliage, what looks like petals is actually a circle of short, frilly white stamens bearing tiny yellow tips arranged around a pea-size green center. This middle swell transforms into seeds, wrapped in a red, fleshy, raspberry-like fruit.

A perennial herb in the buttercup family, goldenseal gets its common name from its sappy, brightly hued yellow rhizome. Were it not for habitat loss and a history of overharvesting, wild goldenseal would be a more familiar sight along the rich loamy floor of the hardwood forests of eastern North America. Slow to mature, it will often take years to fully colonize an area, spreading by seed and rhizome. Yet in the most hidden and protected wilderness, tales are told of goldenseal patches as far as the eye can see. Herbalists today are conscious about using only the cultivated roots of this at-risk plant. This golden puccoon—derived from the Powhatan/Virginia Algonquian word *poughkone,* which refers to plants that yield a purple, red, or yellow dye—is treasured in Native American culture.

THERAPEUTIC USES

Goldenseal root is a powerful bitter and chock-full of medicinal alkaloids. The most famous of these is berberine, which is responsible for the root's deep yellow hue. The root is used for a wide range of concerns, many of which respond to the highly antibiotic activity of berberine. A powder of the root can be used to treat and prevent infection when used as a dusting for open wounds, burns, and lesions. The tissue-toning infusion is used as a folk remedy for mucus membranes. In a mouth rinse, it can help reduce gum irritation and oral infection. Similarly, an eyewash using a goldenseal infusion soothes inflammation and remedies conjunctivitis. In a sitz bath, it seems to alleviate raw and sensitive tissue in the pelvic region.

While the genus *Hydrastis* likely originated from a similarity to plants in the Hydrophyllaceae, or waterleaf, family, today the moniker's reference to water (the Greek *hydros*) evokes its action upon damp and boggy membranes. A few drops of the intensely bitter tincture on the tongue can help curb the phlegmy secretions that instigate postnasal drip. An old remedy for catarrh, or excessive respiratory discharge, goldenseal root helps to clear the sinus passages and is especially indicated when stagnant mucus creates pressure in the ear canals. This remedy is ideal for clearing residual thick mucus after a bout with the common cold. Goldenseal, which is also antifungal, is used in glycerite form for itchiness or irritation and directly in the ear to alleviate ear infections.

As a robust bitter, goldenseal even in small amounts can help ease digestion. It is especially invigorating for those with ulcers or excessive gastrointestinal mucus. Due to its potent taste, some prefer capsules of goldenseal to ease infections in the digestive tract.

The root of goldenseal, deep yellow inside

Berberine: Bitter Yellow Medicine

Berberine is a well-researched alkaloid present not only in goldenseal but also in other medicinal roots such as Oregon grape, yellowroot, goldthread, and barberry. Studies lend credence to the use of plants containing this desirable yellow constituent as a treatment for a multitude of conditions, including infectious diarrhea, diabetes, psoriasis, sinus infections, and ulcers. Given the sensitive status of wild goldenseal populations, many herbalists opt for other berberine-rich plants that are more abundantly available. While herbalists tend to focus on whole plant sources of medicine, some natural health practitioners recommend isolated berberine, available in capsules.

{ Juniper }

Genus and Species: Juniperus communis
Family: Cupressaceae

A dusty berry used in gin, juice, and purification

Common juniper, a member of the cypress family, boasts one of the most extensive geographical ranges of woody plants on the planet. It is the most broadly distributed conifer in the world. This berried evergreen is common to the cool zones of the Northern Hemisphere, reaching as far south as the rocky terrain and windy climate of the mountainous regions of the United States, northern Africa, and the Himalaya.

While there are many dozens of species in the *Juniperus* genus, only a handful, including *Juniperus communis,* produce flavorful and edible medicinal berries. Even within this species there is plenty of variation, as specimens range in size from low, sprawling shrubs to medium-size trees. Like cottonwood, common juniper is dioecious, meaning that each plant is either male or female.

An important food source for birds and wildlife, juniper berries are actually fleshy cones produced by the female plant. The green fruits take many seasons to ripen to a dark blue-black tone, which may appear to be veiled in a white dusty coating, resulting in an overall grayish tint. Common juniper bark is gray to reddish brown and flakes off in long strips that become more shredded in appearance with age. Its evergreen needlelike leaves are short, leathery, and flat.

Given the variability from species to species, some of which are inedible, it may be wise to seek the confirmation of a skilled botanist or forager, or purchase from a reputable source rather than pick wild or cultivated juniper berries for recipes. While juniper may be found as a landscape ornamental, the potential for mistaking the species means it’s best to leave these berries be.

THERAPEUTIC USES

Juniper is best known as a gin flavoring, but its medicinal properties go far beyond that. In the kitchen, juniper berries introduce a wild collage of peppery and bitter flavors accompanied by woodsy and piney aromas. Somewhat gritty in texture and rather bold in flavor, juniper is not typically consumed straight, but rather it is used to add zing to culinary creativity via marinades and spice rubs, vinaigrettes and sauerkrauts, and an array of imaginative kitchen concoctions.

Like most spices and colorful foods, juniper as an addition to recipes not only provides a flavor boost but also health-bolstering antioxidants. The unique flavor inspires the kitchen herbalist to invent remedies, from tasty cough syrups and infused honeys to berry lozenges and fire ciders. An aromatic splash of carminative juniper tea, vinegar, or alcohol-based extract may ease digestion when used after a meal to prevent gassiness and bloating.

Still, a simple cup of juniper tea is a time-honored folk remedy, especially for urinary tract infections and cystitis. As the infusion stimulates urinary flow, it can also relieve edema and may prove helpful during bouts of gout or periods of swelling in the joints.

Juniper-infused salves and lotions are useful for musculoskeletal pains and as a first aid remedy for bruises and varicose veins as well as infections and skin fungus. Topically, juniper can also be used in liniments and baths to encourage blood flow to achy joints. An infused vinegar of the leaves can be made as a stimulating scalp rinse, the scent of which can promote mental clarity (while preventing dandruff). When bath time is over, the infused vinegar makes a great tub scrub, and the stimulating and antiseptic fragrance of juniper lends itself to its use as a general household cleaner. This cleansing herbal fumigant also makes a purifying incense. Its branches and twigs may be used as a strewing herb scattered or hung around a dwelling to ward off pests and sweeten the atmosphere.

Common juniper berries, a source for wild yeast

Feasting on Wild Yeast

Much to the brewer’s and the baker’s delight, the dusty coating on the juniper berry is a naturally occurring wild yeast. This opens the door to even more kitchen magic as DIYers and rewilders culture this yeast by using it as a fermentation starter for homemade ale, wine, and soda. Wild yeast is also the source of sourdough bread, which (by definition) is made without the use of commercial yeast. One traditional concoction, Bosnian *smreka,* is a juicy fermented beverage made from nothing more than juniper berries and water.

{ Ramps }

Genus and Species: Allium tricoccum
Family: Amaryllidaceae

A wild leek to be left in the woods

This woodland wild leek has been celebrated throughout generations of rural communities in eastern North America for its spicy garlic-tasting bulb and flavorful leaves. Ramps grow in patches and favor floodplains of open woodlands or moist shaded hillsides. The rich soil of their habitat of choice tends to feature native stands of blue cohosh, trillium, trout lilies, skunk cabbage, and other springtime ephemerals. Ramps appear in the early spring, their flat oval leaves emerging from each purplish-streaked, onion-like bulb. These smooth leaves, about five inches (12.5 cm) in height and one to three inches (2.5 to 7.5 cm) wide, exude a notable garlicky scent when rubbed. Once the canopy fills in and shades the ground, ramp leaves die back while rounded clusters of small creamy white flowers emerge from erect stalks. In late summer, each bloom on the seed head gives rise to a three-

part green chamber within which grows a shiny round black seed.

Ramps teach a powerful lesson about the reverence necessary when wildcrafting. The popularity of springtime ramps festivals, along with the plant's appearance on trendy restaurant menus, may be problematic. While the market demands whole ramp bulbs, comparable to onions or garlic bulbs, harvesting that part of the plant leaves behind none of the plant material necessary for future growth, making ramps susceptible to overharvesting. A patch of ramp bulbs that is decades old might be wiped out in a few hours by a single motivated forager, never to have a chance to reseed. Treating ramps as an expendable commercial resource thus threatens their sustainability, and replacing this

inconsiderate mindset with more ethical and mindful harvesting practices will ensure that ramps are available as food and medicine to future generations.

Many advocate harvesting ramps by simply clipping a few green leaves and leaving the bulbs to reproduce. There are rules in place to try to protect these plants. In many forested areas where they grow, rules prohibit the poaching of ramps. Forest owners may want to consider cultivating this plant to do their part in restoring ecological balance to native woodlands.

THERAPEUTIC USES

Ramps have a historical use in the Appalachian tradition as a springtime tonic to revitalize the body after a long chilly winter. Many of their supportive benefits are also found in foods such as garlic, garlic mustard, onions, and other pungent plants of the allium and brassica families—plants whose sulfur compounds lend them that spicy bite. These medicinal constituents are incredibly antimicrobial, antifungal, detoxifying, blood-stimulating, and mucus-thinning. Cultures around the world have a heritage of using garlic-like foods to shed parasites, and children benefit from infused honeys of sulfur-containing foods to purge pinworms.

As with garlic or onions, a syrup, infused honey, or vinegar of ramps is an effective expectorant. A warm poultice of any of these herbs may also be applied to topical infections and boils to exert antiseptic and antifungal qualities. A little juice of ramp leaves dropped into the ear or a poultice wrapped in gauze and applied as an earmuff can help clear an ear infection. Ramps and their sulfurous kin are also pungent, and because of this spicy nature, they tend to act as rubefacients, bringing blood flow to the skin’s surface. This quality is handy during cold and flu season, when the

warmth of blood flow can soothe a sore throat or relieve sinus congestion.

Gathered ramps, their bulbs left in the ground for future growth

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Conscientious Foraging for Flavor

Many herbalists choose not to harvest ramps at all, avoiding the use of native plants with questionable sustainability and favoring those that grow in abundance. Some ethically minded herbalists of European descent might favor the herbs of their ancestry instead, such as the flavorful weed known as garlic mustard *(Alliaria petiolata)*. Invading many American woodlands to the point of causing ecological concern, hence available for conscientious picking, European garlic mustard shares a remarkably similar flavor profile with ramps. A zesty fire cider made with garlic mustard is a must-try. Garlic mustard makes a bold pesto and adds a zing to soups and marinades.

{ Saw Palmetto }

Genus and Species: Serenoa repens
Family: Arecaceae

A prickly display of medicinal berries that stands the test of time

Even the most lighthearted herbalist takes care to tread carefully through a saw palmetto thicket. The only species within the *Serenoa* genus, saw palmetto lives up to its name, bearing thick and pointy leathery leaves and stems with sharp-toothed edges capable of lacerating unprotected skin and ripping through clothes. Rattlesnakes favor saw palmetto groves and often find cool solace lurking underneath the leaves. The Florida black bear also frequents palmetto patches, foraging for the nutrient-rich fruits of the saw palm.

An important species endemic to the subtropical regions of the southeastern United States and naturalized in the Bahamas and Cuba, this shrub-like palm covers millions of acres and thrives on coastal dunes, swampy wetlands, and the understory of pine and oak forests. This fan palm has the

ability to spread via underground creeping rhizomes, sending up new growth with the potential to form shrubs reaching three to six feet (0.9 to 1.8 m) in height, although older specimens may reach even higher.

A magnificent pollinator, saw palmetto bursts into long, slender clusters of cream-colored flowers in late spring to early summer. The heady floral fragrance permeates the air, drawing hundreds of pollinator species, including wasps, honeybees, and butterflies. Later, olive-shaped fruits appear in bunches, varying in color from kumquat orange to kalamata black as they ripen and release aromatic notes described as oily, soapy, or cheesy. These fruits, undoubtedly an acquired taste, are sought as food and medicine by both animal and human foragers.

A dedicated industry has built up around the commercial gathering of saw palmetto. Berry harvesters endure heavy toil under the hot sun collecting these fruits, their labor satisfying the demand of overseas nutraceutical markets. In some areas, especially in Florida, conservation efforts and harvest regulations are in effect to protect native stands of saw palmetto, which face habitat loss and overharvest.

THERAPEUTIC USES

Most saw palmetto berries harvested today are exported for use in European phytomedicine, where they enjoy consistent popularity. Standardized extracts composed of fatty acids and sterols derived from saw palmetto (also called liposterolic extracts) are common as dietary supplements marketed for prostate support and benign prostatic hyperplasia (BPH). In the United States, saw palmetto was listed in the U.S. Pharmacopeia of 1906 and 1916 for prostatic conditions, a common usage that current research confirms.

Saw palmetto berries are powerfully diuretic and a traditional home remedy for symptoms associated with testicular and genitourinary health, including excessive nighttime urination and difficulty initiating or maintaining urination. Herbalists often combine saw palmetto berry with nettle root as a urinary tract and prostate tonic.

Saw palmetto berries have been touted historically as medicine for mucus membrane irritation, not just in prostatitis but also cystitis, bronchitis, and sinusitis. Herbalists use capsules of powdered berries and tinctures of the berry pulp for support against the common cold, especially where there is dryness and inflammation of the sinus passages. Saw palmetto is an effective expectorant in the case of sharp and painful bronchitis with a persistent dry cough. This remedy is characterized energetically as having

a relaxing and nourishing effect on the highly strung body and is commonly given for migraine headaches.

Saw palmetto in a low-country setting

Saw Palmetto Stands the Test of Time

The saw palmetto plant is extremely resilient and long-living. Ecologists have declared it a foundational species capable of thriving in poorly nourished, salty, and sandy soil, and able to endure fire and flood as well as drought. Recent discovery has found that slow-growing saw palmetto sprouts can take up to 100 years to fully mature. By analyzing the woody trunks that creep along the ground, known as ramets, scientists date some saw palmetto colonies at over 1,000 years old. This conjecture comes as no surprise to the Indigenous peoples of the southeastern United States, who share a storied history with this important ethnobotanical.

{ Slippery Elm }

Genus and Species: Ulmus rubra
Family: Ulmaceae

A sweet and nutritive tree bark in need of protection

This species' epithet, *rubra,* lines up with another common name for the tree, red elm, a moniker given due to the scarlet fuzz on its early leaf and flower buds. These winter pompoms appear toward the downy ends of the young twigs, which latch onto the branch by a short hairy stalk that is nearly hidden. These puff balls resemble rust-colored moose fur, giving it another common name: moose elm.

As the fuzzy scales open up in early spring, they reveal petal-less clusters of 10 to 20 flowers, which burst into a sea urchin–like display of long filaments and colorful pink-to-violet pollen-producing structures. Leaves have yet to appear at the height of this short-lived floral burst, a timing that facilitates unobstructed wind pollination. Subsequent flowers produce flat, round seedpods called samaras,

lending the colorful puffs a newly ruffled appearance. The papery samaras are designed to spread by sailing effortlessly on the breeze just as the tree’s foliage fills in.

Slippery elm leaves are coarse in texture, with stiff hairs that give them a grayish-green appearance. The simple leaves are awkward in shape, asymmetrical at the base, as if half the leaf was made longer, and coming to an abrupt tapering point at the top. A prominent central vein stretches from base to tip of the leaf. Emanating from this center, parallel diagonal veins angle toward the coarsely toothed leaf edges.

Slippery elm is a tall and graceful deciduous tree, vaselike in silhouette, with deeply furrowed grayish bark. This tree loves streambanks and the limestone-rich rocky soil of its native range, which extends from the central United States to the East Coast and up to southeast Canada.

THERAPEUTIC USES

Slippery elm is best known for its fibrous inner bark, which is slimy (hence the “slippery” descriptor) when mixed with water. Its long fibers, an important source of cordage and basketry for Indigenous folks who have coexisted with these trees for ages, are said to quench the thirst when chewed. Rich in mucilage, slippery elm bark is nutritive with a subtly sweet flavor. Kitchen herbalists use a powder of the bark to thicken soups and lend a nourishing boost to cereals or porridges reserved for small infants and convalescing elders. The powdered inner bark is also used to make lozenges, which are taken to soothe raw throat tissues and cool and

protect the burning membranes of the stomach irritated by ulcers and reflux.

Like other mucilaginous powders, slippery elm makes a comforting poultice, one with a reputation for drawing out inflammation and infection. Its cooling demulcent quality takes the sting out of skin sores, burns, and abrasions and tends to all the sensitive surfaces of the body. A cold infusion of slippery elm bark produces a soft, viscous tea that is used topically as an eyewash or sitz bath or internally consumed to gently moisten the digestive membranes. A little powder in warm water or apple juice can lend a gentle laxative nudge to cases of dry constipation.

Harvesting slippery elm bark judiciously does not harm the tree, but other more common herbs offer similar medicinal properties.

Wildcrafting’s Slippery Slope

Overharvesting concerns with slippery elm are grave and growing, as Dutch elm disease has swept across the land and seriously affected the populations of this unique tree. These issues are compounded by the unethical harvest of slippery elm bark, which may destroy the already threatened tree. Savvy herbalists know to never girdle a trunk (that is, make an incision all around its circumference) to harvest bark, as this is fatal to the tree. Ecologically conscious herbalists often harvest the bark only from fallen tree branches, when the opportunity arises. And these days, many herbalists substitute other mucilaginous herbs found in greater abundance, such as marshmallow root (easily found in powder form), mullein leaf, peach leaf, or flax seed.

{ Solomon’s Seal }

Genus and Species: Polygonatum biflorum
Family: Asparagaceae

A revered woodland root to support joint health

Beneath the rich soil of the forest’s edge, herbalists dig for the thick and juicy horizontal rhizomes of Solomon’s seal. Similar in appearance to a ginger root, the rootstalk of this plant grows from a few inches to two feet (0.6 m) or more, depending on age. Each spring begins with a new green shoot anchored from the rhizome. Each autumn ends with the withering decay of the stalk back into the ground, leaving behind a root scar. Counting these flat round imprints along the rhizome offers a rough estimate of the age of this perennial. This scar is said to resemble the seal of King Solomon, a symbol of harmonious opposition in medieval Arabic traditions. The imagery of the seal reflects a base on the ground with a tip reaching heaven. The herb Solomon’s seal embodies this

peaceful paradox by remaining rooted even as it stretches its elegant stalk upward.

From above, the plant's tall main stem gracefully arches into alternate leaves and clusters of tubular white or greenish-white flowers dangling below from the leaf axils. Later, the flowers give way to dark berries that are inedible to humans but desirable to birds.

Solomon's seal is the common name for many *Polygonatum* species, which are found in various regions around the world. *Polygonatum biflorum* is the medicinal variety, more common to North American forests.

THERAPEUTIC USES

The knobby scars along the rhizome of Solomon's seal give it a multijointed appearance matching its nomenclature, *Polygonatum* ("many knees"). In accordance with the doctrine of signatures, a system of understanding plants by their appearance, this plant's most common use today is as a support of joint and spinal issues. Dislocated joints and spinal misalignments may benefit from preparations of the root taken internally.

A fresh rhizome poultice applied topically is a popular go-to for bruises, sprains, and injuries as well. Similar to comfrey, which is also used fresh topically for injuries, Solomon's seal contains allantoin, a remarkable constituent that can speed the rate of cellular multiplication. Allantoin's capacity to increase cell turnover makes it useful in repairing wounds, muscle tears, ligaments, tendons, and bones.

The sweet root of Solomon's seal has a slimy mucilaginous property, which makes it a cooling and protective topical application to irritations like cuts, scrapes, and rashes. The demulcent quality of a syrup or glycerite made with this woodland medicinal also helps resolve dry coughs and lung issues such as bronchitis.

Many species of *Polygonatum* also contain cardioactive glycosides, which benefit the cardiovascular system. In China, Solomon's seal is commonly used as a supportive heart tonic. Because of the potency of its constituents, however, the internal use of Solomon's seal should take place under the supervision of a qualified herbalist or practitioner.

Sacred Solomon's seal is also used in various cultures in a mystical energetic manner. Ancient Indian cultures, for example, have a heritage of using the root to replenish metaphysical energy after prolonged meditation or yoga sessions.

Solomon's seal is a national treasure of American forests and must be ethically wildcrafted to preserve its stands for future generations. Growing a patch of Solomon's seal can

be one solution. It makes an excellent plant to cultivate in the shady area of a yard or when restoring a woodland habitat.

Solomon’s seal in full bloom

True or False?

“True” Solomon’s seal is not to be confused with false Solomon’s seal *(Maianthemum racemosum).* Both plants grow in similar habitats, often right beside each other, and so in early spring even the wise herbalist might find it difficult to tell them apart. Later in the year, while the bell-shaped flowers of true Solomon’s seal dangle beneath its leaves, false Solomon’s seal’s star-shaped flowers form a plume at the end of the main stem. Come autumn, the berries of the false plumed species appear bright red in contrast to the deep blue fruits of true Solomon’s seal. Many herb students prefer calling false Solomon’s seal by its common name, Solomon’s plume, to help remember the difference and avoid confusion.

{ Witch Hazel }

Genus and Species: Hamamelis virginiana
Family: Betulaceae

A staple tree from the winter woods to the medicine cabinet

As the frosty nip of winter approaches and the forest flora begin turning in for the season, American witch hazel stirs the sensory delights of the wildcrafting herbalist. Just when all leaves have fluttered to the forest floor and the barren branches of the canopy allow late autumn sunlight to trickle in, this small tree comes alive. Shedding its last leaves, it graces the observer with one of nature's final bursts of the year as spidery tufted flowers in shades of yellow to green present themselves to the chilly air.

Golden ribbons of witch hazel petals curl in protection from frosty extremes then unfurl in the fleeting warmth of shortened days. Their sharp citrus fragrance, alluring to winter pollinators like the shivering owlet moth, is the perfect accent to the earthy scent of autumn. The enduring

flowers eventually give way to brittle capsules within which the results of pollination take their sweet time. The following winter, as new flowers emerge, the rough brown pods of the year before split open and spill their seeds for new generations of witch hazel.

The genus *Hamamelis* (meaning “together with fruit”) alludes to this coexistence of new flowers with ripe fruits. Wintry walks in the woods may be accompanied by a brisk rustle of dry leaves on the ground, but with witch hazel in the midst, passersby might hear the crackling projectile pop of its explosive seed, which can hurl itself into the forest 10 to 20 feet (3 to 6 m) or more from the parent shrub.

As witch hazel flowers settle from their explosive winter display, the tree’s wavy toothed leaves welcome the springtime. Heavily veined, the leaves are simple, alternate, and intriguingly asymmetrical with uneven bases. The witch hazel tree, picturesque in its crooked branching, is an important member of the rich forest cove community understory, providing food for wild turkeys, squirrels, caterpillars, ruffed grouse, and more. To humans, its lore and medicine are unparalleled.

THERAPEUTIC USES

Next to culinary herbs, witch hazel might just be the most common herbal product on the household shelf. It is one of the few herbals approved by the FDA for sale over the counter, promoted as an astringent and skin protectant with gentle antiseptic properties. Hamamelis water, as it was originally called, is made via steam distillation and preserved with alcohol. It is recommended as a topical for mild abrasions and burns. The cooling remedy makes a convenient compress for poison ivy rashes, insect bites, hemorrhoids, and varicose veins.

Herbal medicine crafters use the astringent liquid as a base for their skincare remedies and cosmetic products, using it as a vehicle to absorb the beneficial constituents within jewelweed, rose petals, calendula blossoms, plantain, and many other skin-tending herbs. Such infusions are used as cooling skin spritzers or as an ingredient in healing lotions. As handy as the store-bought witch hazel distillation is, many herbalists prefer to work directly with the twigs and leaves to make stronger medicine. A warm water infusion of witch hazel twigs, free of alcohol, in an eye wash, sitz bath, or facial steam takes on an optimal spectrum of astringent tannins and, by avoiding the alcohol sting, is far more appropriate for delicate areas.

The delicate cold-weather bloom of witch hazel

Witch Hazel Lore

Ethnobotanical wisdom about witch hazel originates through the plant's relationship with Indigenous peoples, who use witch hazel twigs as an astringent remedy, its seeds for food and bead crafting, and its branches for a practice known as dowsing. The forked sticks of the witch hazel tree are preferred as "divining" dowsing rods, used to locate underground water for wells. This practice, referred to as "water witching," was popular among European settlers, who mimicked the Native Americans they observed dowsing for water, according to the U.S. Forest Service. While many revere witch hazel for its magical properties, its name is unrelated to bewitchment, instead originating from the old Anglo-Saxon word for bendable, *wiche.*

HERBAL HERITAGE

The Tradition of Conservation

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The growth of mainstream herbalism and the broader use of herbs at home is a triumph, but an increased interest in herbs must be accompanied by a commitment to sustainability. Herbalists have deep reasons to be concerned with the conservation of medicinal plants. They are by nature connected to the earth. They have a major vested interest in the longevity of the herbs they choose to use, both for their own present-day job security and out of foresight for generations of herbalists to come.

Irreplaceable woodland medicinals—including black cohosh, goldenseal, American ginseng, and Solomon's seal—are national treasures unique to North American forests. They are also some of the most popular herbs in modern herbalism, and the wild, rather than farm-grown, versions are often preferred. But the habitats of many medicinal wild plants are under attack from deforestation, overharvest, climate change, and other factors. Herbalists are being called to come together to defend these effective but scarce remedies.

Herbs are best gathered from the wild, but the harvest must include care for conservation together with respect for and research into sustainability issues for every species.

Historically, a family in the southern Appalachian foothills might have relied on each autumn's American ginseng root harvest as their primary stream of income. The family's well-being—both physical and financial—was intricately intertwined with that of the patch of plants they tended. If they neglected to scatter the seed before uprooting the plant, or if they dug up the whole root rather than replanting a piece of it, they would endure the consequences of having little or no harvest the following season.

UNITED, WE SAVE THE PLANTS

Modern herbalism and commerce in medicinal herbs have spread around the globe, raising concerns about whether the herbal supply chain can meet the demand of herb-hungry consumers. Exports of native herbs are rising at the same time that their habitats are dwindling, putting more pressure on herbal suppliers to meet the consumer demands of other countries. With herb use on the rise, global coordination and action by herb conservationists are essential.

Bioregional herbalists, those who focus on the use of herbs local to their region, address overharvesting by pointing to the use of abundant, weedy herbs at their doorstep rather than their more rare or exotic counterparts. Herbalists focused on public awareness and conservation likewise tackle sourcing quandaries by promoting protection of native medicinal plants and their environments. Simultaneously, they look toward pursuing renewable sources of herbs for future generations.

A close-up of the flower of goldenseal, at-risk according to United Plant Savers

UNITED PLANT SAVERS

Preserving wild medicinals is also the mission of United Plant Savers (UpS), a nonprofit group specifically dedicated to sustaining North American herbs. UpS focuses on research, education, consumer awareness of issues in sustainable plant medicine, and amplifying voices of plant defenders on a national scale. UpS maintains the Center for Medicinal Plant Conservation, a dreamy 370-acre plant sanctuary located in southeastern Ohio whose activities encompass artist fellowships, botanical conservation training programs, an informative “talking medicine trail,” and abundant stands of native medicinals classified as at-risk. This botanical oasis serves as a model for truly sustainable land use and wild plant propagation and regeneration.

UpS programs like “Hope for Hydrastis,” a five-year goldenseal *(Hydrastis canadensis)* planting project focused on getting hundreds of pounds of rootlets in the ground, strive to massively expand the numbers of specific endangered species. The Forest Grown Verified credential aims to structure and standardize the process of shade cultivation of 10 popular woodland medicinals for forest farmers, herb processors, and retailers.

As a global model of human conservatorship of medicinal plants, UpS serves as a template for other countries to follow in protecting plants of their own bioregions. The FairWild certification based in Switzerland and England, for example, aims to infuse standards of true sustainability into the herbal supply chain via its third-party management system.

Solomon’s seal, represented in a woodblock print from Kusa Bana Hyakushu—One Hundred Varieties of Flowers, a 1901 book by Kono Bairei

AT-RISK PLANTS TO WATCH

Conscious consumers take care to avoid purchasing herbal products that include wild-harvested ingredients from plants on the UpS species at-risk list of the 40 plants most susceptible to negative human impact (found online at UnitedPlantSavers.org). Many of these herbs, such as arnica and white sage, are under the dual threat of enjoying expanding popularity while also suffering from diminishing populations.

Each species designated as at-risk by UpS is accompanied by a numeric value indicating its level of endangerment, based on information about its current population, demand, growth rate and habits, lifespan, region, ability to withstand disturbance, medicinal uses, and other key factors. Sandalwood, for example, has a risk assessment of 75 (on a scale of 30 to 90, with a higher score being more at-risk), indicating that the stands of this tree are under extreme duress and should not be harvested in the wild under any conditions.

THE FUTURE OF HERBAL MEDICINALS

When plant species are evaluated in this way, they are seen not as expendable resources to be used up but rather as living, intelligent beings that can act as mentors and guides, even bridges to other states of consciousness and new levels of wellness. “If you listen, they will teach you” is a mantra promoted by UpS, calling in the humble herbalist and inviting the earth’s stewards to listen carefully, nurturing the enduring tradition of plant conservation.

Black cohosh, deemed at-risk by United Plant Savers

Herbs Valued in the
Conservation Tradition

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AMERICAN GINSENG
Panax quinquefolius

BLACK COHOSH
Actaea racemosa

GOLDENSEAL
Hydrastis canadensis

RAMPS
Allium tricoccum

SLIPPERY ELM
Ulmus rubra

. . . . . .

8. Community Herbalism

CANNABIS
DAMIANA
FRANKINCENSE
HAWTHORN
HOPS
KAVA KAVA
LAVENDER
MOTHERWORT
MUGWORT
PASSIONFLOWER
RUE
TEA

Leaves, spoons, cups, teapot: an herbal tradition

Herbs Bring People Together

Herbs have always played an important role in tending the hearts of communities and infusing culture with a sense of cohesion. Humans have long been drawn deeply into the botanical world for subsistence, survival, and ceremony. Social gatherings around a plant-based focal point are still one of the primary

modes in which people come together, now in the form of downing fermented hops (or traditionally, mugwort) by way of a beer with a friend at the bar or sipping a green tea latte at a bustling coffee shop. Beyond simply bringing people together, herbs also excel at tightening the bonds not only among humans but also between humans and the natural and mystical worlds.

Often, the nurturing role of plants extends beyond the physical realm of aiding digestion or regulating stress and toward the dimensions of peace, love, and a sense of innate unity. Some herbs escort humans into the lofty realms of purposeful ritual, fostering visionary dreams for the seeker. Others anchor us in stabilizing solace, lending trauma survivors a protective embrace. For the herbalist, the herb is as much a remedy for individual emotional and spiritual resilience as it is a symbol of activism, solidarity, and responsibility for community health. The herbs in this chapter, from precious frankincense to everyday household tea, do just that.

THE CAREGIVERS

Many community herbalists take on the role of caregiver for their neighborhood. They perform the selfless, though infinitely rewarding, act of administering comfort to those in need. This act of service can take many shapes. One day, it may look like showing up on the doorstep of a grieving friend with a basket of heart-tending hawthorn and a jar of nourishing nettle soup. The next, it may involve sharing a pitcher of potent passionflower tisane to promote harmony in a household where parents are juggling work demands with restless children at home.

Harvesting sprigs of St. John’s wort. Photo courtesy Herbal Academy

What often gets overlooked in the rush of everyday living is caring for the caregiver. This tending to the tender is one of the deepest forms of nurturing attention. Motherwort is an herb that encompasses and accomplishes this beautifully. A gesture of gifting motherwort syrup to the exhausted caregiver or wounded healer helps to replenish even the fiercest of hearts.

THE ACTIVISTS

Many service-oriented herbalists become active in mutual aid networks. They are logistical coordinators ready to hit the ground with support when faced with crisis scenarios, local disasters, and everyday health challenges. Trained herbal medics might tend to first aid stations during chaotic encounters between activist protestors and tear gas or be ready to use calming nervines such as lavender and kava on someone suffering from a panic attack at a crowded event. They mobilize the community and facilitate calls for herbal medicine donations, sort through boxes of bulk herbs, assemble herbal first aid kits, and distribute care packages to those affected by physical or emotional trauma or impacted by a lack of resources.

These herbal care packages might include calming teas that help protect the nerves in the face of stress. A lavender inhaler goes a long way in de-escalating panic and easing shock. Community care kits are specific to current local needs. Welcome additions may be immune- supportive elderberry syrups for those unhoused or temporarily sheltered during a pandemic, or respiratory tonics for those exposed to smoke inhalation during a forest fire.

A creative herbalist in her studio

THE PEACEMAKERS

Herbs are seen by many as imbued with spirit, somehow enmeshed in the lineage of many spiritual and religious traditions worldwide. For the spiritually inclined, herbs are often invited into ceremonial circles of peaceful and intentional engagement. Herbs like kava and lavender instill in their consumers a benevolence and sincerity of expression and acceptance that crosses cultural boundaries.

Asian hospitality features delicately manicured fronds of green *Camellia sinensis* (tea) as a time-honored centerpiece of tradition, quietly bringing people together in a meaningful way in the honor of spiritual clarity. Pacific Islanders sip from a bowl of kava to melt away stress, promote amicable dialogue, and inspire fellowship among gatherings of friends and strangers alike. In the arid deserts of Mexico, the leaf of

the damiana shrub brings a rich warmth and soothing transcendence perfect for hallmarking a loved one’s rite of passage or a special moment between lovers.

THE VISIONARIES

Certain herbs convey a new way of seeing things onto the humble herbalist who is open to a shift in perspective. A bundle of aromatic herbs or a pinch of fragrant herbal resins sprinkled into a fire elicit a prayerful smoke that cleanses and prepares a physical space for healing inspiration. A sleep pillow filled with mugwort and hops summons lucidity into the night and infuses the dreamworld with clear sight. A sprig of blue-hued rue used as an eyewash or smudge stick clears away negativity and inspires meaningful vision in those who share in its cultural legacy. When this protective herb is placed nearby, it keeps a watchful presence over a homestead.

Artemisia as represented in the Herbarium Apulei Platonici, an herbal dating back to the fourth century

THE CLINICIANS

Clinical herbalists fill an important niche for those in the community who seek professional guidance about natural herbal remedies for health and well-being. Clinical herbalists are adept at matching people to plants. Depending on their background, they may draw from practice models that incorporate energetic assessment, traditional practices, or evidence-based research. They work in an assortment of settings, ranging from private practice to an integrative team of practitioners in medically supervised settings. Clinical herbalists may gain skills from formal education,

mentorship, apprenticeship, and even family-derived traditional lineage.

{ Cannabis }

Genus and Species: Cannabis sativa
Family: Cannabaceae

An herb as famous as it is infamous

Humanity's dramatic relationship with the cannabis plant spans many millennia, with archaeological evidence of its cultivation in eastern Asia dating back 12,000 years. The quest for its origins leads to multiple regions within Eurasia, but true wild cannabis no longer exists.

Human intervention has given rise to a seemingly infinite variety of genetic characteristics. Many of these variables are streamlined from three paths of its botanical lineage, namely subspecies of *sativa, indica,* and *ruderalis.* Further cross-hybridizing has led to a plethora of variations, selected for outcomes ranging from mind-altering potency to weather-hardiness.

THERAPEUTIC USES

Despite a history of regulatory restrictions in many parts of the world, cannabis as folk medicine has endured, a staple remedy through the ages for many maladies, including nausea, glaucoma, anxiety, pain, stress, restlessness, insomnia, and anorexia. National and state laws have restricted access to it as a medicinal, but as some of these laws have changed in recent years, research communities have been ushering in a new evidence-based era of cannabis’s place in the medicinal canon.

The medicinal bioactivity of cannabis relies upon the chemical composition of its secretions, which vary based on genetic strain, cultivation method, weather, and other factors. Many of the herb's aromatic terpenes and colorful flavonoids are of interest to chemists studying their ability to attenuate acute and chronic inflammation, in addition to other therapeutic effects. Alongside these two constituents, common to many plants, more than 100 chemical constituents called cannabinoids have been identified. Cannabinoids are familiar to the human body, which produces its own, called endocannabinoids. These naturally occurring compounds interact with the body's extensive endocannabinoid receptor system, with impacts on essential functions such as appetite, mood, sleep, and even reproduction.

Of these cannabinoids, two have gained the most attention today: tetrahydrocannabinol (THC), which is psychoactive, and cannabidiol (CBD), which is nonintoxicating. While both compounds may possess medicinal value, CBD may offer therapeutic outcomes without the high for which THC is best known. Evidence suggests that the use of CBD internally may prevent seizures and relieve migraines, chronic pain, anxiety, and addiction. CBD as topical oil or salve has also been found effective in easing nerve pain and sore muscles.

THC is also proving to offer distinct healing effects beyond the high. For many, it relaxes muscular tension and helps those under stress to unwind. For others, it revs the appetite, making it a beneficial adjunct for chemotherapy patients and others struggling with taking in adequate nourishment.

Interest in other cannabinoids—such as cannabigerol (CBG), known as the "mother of all cannabinoids"—has recently prompted a wave of pharmaceutical exploration. The increased legal availability of plants cultivated to highlight specific compounds is now opening the door for

cautiously curated cannabis remedies in some areas of the world. In the meantime, while scientific study unravels the nuances of the individual cannabinoids, many herbalists who work with cannabis laud the therapeutic synergy of the whole plant.

The cannabis flower

The Budding Business of Industrial Hemp

So-called industrial hemp comes from the *sativa* subspecies of cannabis, genetically manipulated for low THC content. The sturdy stem of the plant provides extremely durable fibers used in textiles and as building materials. In the United States, the 2018 Farm Bill lifted restrictions, reigniting the agricultural production of hemp for fiber and seeds as long as the plants grown contain less than 0.3 percent THC by dry weight. Hemp crops are also grown for non-THC cannabinoids like CBD and for edible seeds, which contain a nourishing range of healthy amino acids and omega-3 fatty acids.

{ Damiana }

Genus and Species: Turnera diffusa
Family: Passifloraceae

A sun-infused leaf for lovers

Legendary damiana permeates the desert air with the enticing resinous fragrance of the Maya culture's soul and infused radiance of its solar gods. Although damiana is found sparsely in the arid regions of southern Texas, California, the Caribbean, and as far as South America, the libido-laced lore of this scraggly little shrub penetrates even more prolifically into the dry rocky hillsides of the northwest Mexican state of Baja California Sur and its surrounding areas. There it resides amid the cacti-studded landscape, where it mingles among wild stands of Mexican oregano and flirts with the Mexican fritillary butterfly, which relies on damiana as a host plant.

This gnarly shrub is composed of small, fuzzy, silver-green leaves, deeply jagged. At its annual floral climax, the damiana shrub is speckled with sunny yellow flowers, each composed of five notched petals arranged in a sun-ray pattern. The plant is considered a treasure to the locals of its

native regions, who pass along stories of its ancient folk usages.

Often confused with the deeply blue-green, robust yellow alder *(Turnera ulmifolia),* commonly sold as damiana for ornamental landscaping, authentic damiana deserves our protection. Arduous to germinate and challenging to propagate, it survives best in its native habitat. Given tremendous market demand for it as a medicinal, its protectors are trying harder than ever to enforce harvesting regulations in its native environment.

THERAPEUTIC USES

Experienced herbalists handle damiana ceremoniously and with reverence. Folklore touts its aphrodisiac effects, a topic of debate within the scientific community. Although anecdotal tales of the elixir’s unique aphrodisiac effects persist, damiana should be used with discernment, given the concerns about its conservation.

The medicine of damiana leaf has long carried a reputation for evoking passion and desire. Herbalists rely on damiana’s gentle rejuvenation of blood flow to the pelvic regions, making it appropriate in not only love tonics but also in formulas intended to support fertility and menstruation as well as prostate and bladder health. Its eros-inducing aromatic profile, described as both spicy and chamomile-like, gives the remedy a penchant for softening the nerves, pacifying tension, and providing restoration after nervous depletion. Like chamomile, damiana contains the flavonoid apigenin, which is often credited for easing anxiety.

The folk healer turns to a damiana infusion as an aid in convalescence, offering relief from irritable exhaustion and depression. Like most aromatics, damiana brings ease to the smooth muscles of the digestive organs, helping as a carminative to relieve gassiness and releasing the grip of constipation. Damiana syrups are given to those with weak energy who struggle with a feeling of constriction in the lungs, where the remedy catalyzes a yielding of the bronchial tract.

Damiana leaf is affectionately known for its uniquely inviting clove-like flavor profile. In Mexico, herb-infused liqueurs are beautifully bottled up and reserved for special occasions to symbolize love and partnership. The leaf brings a rich warmth and soothing accent to herbal smoke blends, perfect for a ceremonial moment of love around a romantic campfire.

Damiana leaves and flowers processed by mortar and pestle

Herbal Love Potions

A pinch of damiana can add a hint of solar warmth to a nourishing aphrodisiac cordial meant to be enjoyed with a lover. Herbal elixirs of love are thoughtfully composed to tantalize the senses and induce an amorous atmosphere. Herbalists make their first move by deeply nourishing the physical body with ingredients such as milky oats or shatavari and embracing themselves and their partners with the sweet sensual indulgence of cacao, vanilla, or honey. A cordial’s heat gets turned up with the spicy enticement of clove and cardamom. The concoction is incomplete without the flirtatious floral touch that can be found in notes of relaxing lavender or rose.

{ Frankincense }

Genus and Species: Boswellia serrata
Family: Burseraceae

A divine tree resin to elevate body and spirit

Also known as *Boswellia,* Indian frankincense, or *Salai guggul,* the *Boswellia serrata* tree grows only in India, though other species can be found in Africa and western Asia. Famous since antiquity for the sticky fragrant sap it bears, frankincense is a medium-size tree with a sparse canopy composed of long leaves, each of which is arranged into a pattern of paired leaflets. Various species within the *Boswellia* genus yield frankincense, with aromatic nuances and subtle differences among them.

This ancient substance is harvested in a process known as gummosis. An injured tree exudes a milky sap that serves a natural purpose, sealing wounds and preventing microbial invasion. Humans desiring these same medicinal and fragrant virtues tap the gummy aromatic resin from the tree's trunk by inflicting a deep incision in it and peeling

away a papery section of reddish bark. Over time the resin bubbles forth, firming up to a translucent coral paste that is chiseled off the tree for processing into the transparent golden pebbles sold as frankincense. When burned, these nuggets emit a sweet, woodsy fragrance of balsam.

This incense has been harvested for generations, sought for perfumery, religious purposes, and medicinal reasons. These days, concern is growing over the exploitation of these plants because of overtapping of the slow-growing trees and the shrinking ecosystems that support them. Sustainable supply chains take a critical look at harvesting

practices and are informed by both the traditional knowledge of native elders and balanced insights from modern ecologists.

THERAPEUTIC USES

Frankincense exudate is also known as an oleo-gum resin, based on its composition of essential oil, polysaccharide gum, and resin. In the Ayurvedic tradition, it is defined as bitter, sweet, astringent, and aromatic, and used both internally and topically for a variety of conditions. Like other sticky tree saps, frankincense gum or its infused oils are brushed onto topical ulcers, cold sores, and wounds to expedite healing and provide a protective antimicrobial seal.

Frankincense gum is available as a powder to be mixed into warm water or milk. Herbal tradition promotes this remedy for encouraging blood flow to the joints, detoxifying the blood, and quieting menstrual discomforts. To ease asthmatic conditions and issues of the bronchial tract, the oleo-gum resin itself is lightly simmered to release its aromatics for a steam inhalation.

Chemical analysis of the resin reveals compounds thought to inhibit various enzymes and proteins called cytokines associated with inflammatory pathways in the body. Dietary supplements available as capsules focus on boswellic acids extracted from the sap and are marketed for joint, tendon, and bone health and for inflammation. Frankincense is used in topical creams and liniments for joint pain and swelling.

Because of its potent antioxidant and anti-inflammatory activity, frankincense may also be used to support the brain in the treatment and prevention of cognitive decline and injury, as well as to manage cardiovascular disease. Ongoing research points to the possibility of its use as a cancer suppressant as well.

Herbal gifts have long been valued, as recalled in this sixth-century mosaic from Ravenna, Italy, of the three kings bearing gold, frankincense, and myrrh—the last two both botanical resins—to the Christ child.

Spiritual Gifts of the Earth

The divine gift found in the aroma of frankincense has long been associated with sacred and ceremonial usage across many religions. Frankincense is touted for its holy smoke, which inspires prayer-like meditation, mental clarity, and elevation of the highest spiritual self. Used cross-culturally in ceremonies honoring birth and death, both frankincense and myrrh have been used in embalming rituals in which their smoke is believed to guide spirits to the afterlife. Tree resins in general were an important tool in embalming and mummification, since their sticky antimicrobial qualities can prevent decay in the deceased body.

{ Hawthorn }

Genus and Species: Crataegus monogyna
Family: Rosaceae

A protective tree for heart health and strong boundaries

The hawthorn tree is poised on guard, with long thorns and twisted branches, all contributing to its role as the guardian of the land. Hundreds of species of hawthorn grow throughout the Northern Hemisphere, and while most are used interchangeably for medicine, *Crataegus monogyna* is the European species herbalists most often use. A member of the rose family, hawthorn is beloved in country settings for its deep-green foliage and ornamental burst of May flowers.

Emerging from clusters of tightly spherical buds, creamy white-to-pink blossoms are composed of five crinkled petals that encircle a gathering of dainty stamens dancing around a central pistil. This exuberant spring display delights the senses with floral abundance and an efflorescent aroma, soft in contrast to the roughly furrowed bark of the wise old tree.

Hawthorn is a paradox in many ways, both revered by the herbalist and feared by the passersby due to its intimidating thorns of protection. Often forming natural hedges, spiny shrubs and understory hawthorn trees serve as sanctuary for birds and small animals, which forage upon the autumn berries. Just as the deciduous leaves showcase their autumn colors, the berries, or haws, dangle like miniature apples. Primarily red but ranging to shades of apricot, the decorative haws often cross paths with the first winter frosts late in the year.

Folk herbalists relish time spent harvesting wild hawthorn, adopting a mindful presence to avoid any thorny repercussions. An herbalist might visit the hawthorn hedge over many seasons, gathering buds, flowers, and leaves in the springtime and plucking berries in the fall.

THERAPEUTIC USES

All the medicinal parts of hawthorn are packed with potent antioxidants, but the berries in particular hold a time-honored reputation as food for the heart. The kitchen herbalist revels in finding creative ways to transform the tart and astringent cored berries into delicious jams, wines, syrups, and candied treats.

Clinical herbalists and cardiologists alike respect hawthorn’s evidence-based usage as a cardiovascular support, thought to improve oxygenation and blood flow

through the heart. Its colorful polyphenols lay the groundwork for strong blood vessels, making hawthorn useful as a tonic for varicosities and cardiovascular insufficiencies. Its affinity for capillaries combined with its ability to scavenge for troublesome free radicals makes it a top choice in formulas to nourish healthy and efficient blood pathways not only to the heart but also to the eyes and brain.

Friendly to both the cognitive and cardiovascular systems, hawthorn is gentle enough for children and elders alike and can support increased focus, attention, and concentration. A simple floral infusion of the herb can help bring about calm and presence. Herbalists often blend the flowers with the berries for their gentle synergistic effect of de-escalating nervous tension and relaxing high blood pressure.

Herbalist-prepared tinctures and decoctions of hawthorn are commonly available, but preparations from this classic tree are also staples of the supplement market and can likely be found in capsule form at any local pharmacy. Those already on heart medications or blood thinners would be wise to chat with their physicians about the potential benefits of hawthorn for the heart before engaging with it as a medicine.

An autumnal hawthorn branch bears ripe berries and sharp thorns.

A Fence of Thorns

Hawthorn derives its name (“haw” meaning “hedge”) from a fence of thorns, a reference to its utility in establishing homestead boundaries. Stout rows of spiky hawthorns are also places of respite for vulnerable creatures. Some herbalists apply the literal “fence of thorns” within this tree’s name to the metaphorical emotional boundaries that healers draw upon when working with grieving and vulnerable individuals. Hawthorn remedies are considered protective, reputedly strengthening resilience in the weakened heart both physically and metaphysically. An ally in times of heartache, its sheltering energetic is often combined with herbs that tend to heartache such as lavender, mimosa bark, rose, and passionflower.

{ Hops }

Genus and Species: Humulus lupulus
Family: Cannabaceae

A climbing bine that grows far beyond beer

Hops, one of the most celebrated plants in the world, is best known for its starring role in beer production. This vigorous climbing perennial can reach over 20 feet (6 m) per growing season, twirling around trellises and scaling arbors, fences, and other vegetation. Not exactly a vine—defined as a plant that uses twisty tendrils to grasp toward the sun—hops is instead classified as a bine, because it uses sticky hairs to secure itself as it climbs. Hops bines are profuse with lush foliage, roughly wrinkled leaves marked by toothed serrations and deep lobes, the shape varying depending on the variety.

Hops is dioecious: Each plant is either male or female. The female's cone of yellow-green flowers, called a strobile, is layered with overlapping papery bracts containing glands between them that produce a powdery aromatic golden

resin, known as lupulin, late in the summer. When cultivated for brewing, female plants are desired because of their resinous strobiles. In such settings, male plants are commonly removed to prevent fertilization of the female plants, which causes flowers to develop seeds and damages the flavor.

The hops plant is an international traveler: The native range of wild hops is Europe to Siberia to northern Iran and Morocco, and wild populations have crossbred along the way. Because of the plant’s broad use in the commercial beer industry, lab-based breeding has also played a role in developing the characteristics of novel hops cultivars. Nowadays there are dozens of hops variations around the world, all carefully selected for their subtle differences in

bitterness, aroma, and flavor composition. Connoisseurs of hops comment on the infinite combinations of qualities, which include floral, earthy, fruity, and tropical notes.

THERAPEUTIC USES

Hops has long enjoyed global recognition for its use in beer alchemy, where it acts as a preservative and bitter agent and lends characteristic flavor and aroma. Kitchen herbalists, too, delight in the artisan craft of fermentation but also exercise culinary creativity, concocting hops-infused vinegars, flavored cooking oils, aromatic salts, and hopped-up sugars.

Hops' place in the herbalist's materia medica precedes its role as a brewing staple. To the herbalist's senses, hops is considered bitter, aromatic, and cooling. As medicine, a hops infusion is best known for its sedating quality, taken to instill calm, quell restlessness, ease anxiety, and cool a hot and worried head. Such a remedy is at the ready for bedtime formulas, especially in combination with other nervine herbs like skullcap, chamomile, or lemon balm. Crafty makers stuff herbal pillows with hops flowers to instill a good night's rest and prevent insomnia. A tranquil bath made with a hops infusion can help wind down mind and body from a stressful day.

Hops' tension-taming strobiles contain phytoestrogens and are used in herbal blends to support hormone balance and reduce the symptoms of menopause. Folk herbalists give hops to help alleviate menstrual cramps and relax muscle tightness. Hops liniment can be applied as a muscle rub to soften muscular tension. Antimicrobial and anti-inflammatory hops are also used in poultices and topical remedies for soothing rashes and minor abrasions.

Some herbalists prefer hops in a tincture, as the infusion is too bitter for some people. This bitter trait, however, in

synergy with its aromatic flavor, is what enables hops to be a digestive aid and makes it common in formulas taken before meals.

A handful of hops

Cannabaceae Cousins

Hops is not the only culturally exalted species of the Cannabaceae family. The illustrious cannabis, famous for its psychoactive compounds and medicinal benefits, also shares a place in this esteemed botanical family. Both hops and cannabis display a unique version of aromatic skunkiness, related to medicinal terpenes, albeit the “high” sensation attributed to THC is unique to cannabis. Hops and marijuana, both subjects of propagation enthusiasts, take their respective places on the throne of social and recreational culture. And while both have a notorious reputation of inducing an element of rabble-rousing, these related ethnobotanical legends have an equally storied tradition of circling people together in community.

{ Kava Kava }

Genus and Species: Piper methysticum
Family: Piperaceae

A sacred tropical plant for relaxation and harmony

The survival story of kava kava (or just kava) highlights the interconnectedness between humans and plants. The dioecious kava—each plant is either male or female—does not reproduce naturally. Female plants are exceptionally rare, and when they do appear, they don't produce viable seeds even when pollinated.

One legend (slightly elaborated with scientific nomenclature) has it that *Piper methysticum* is a mutated offspring of the wild kava species, *Piper wichmanii* of the Piperaceae family. This theory proposes that humans, having been intrigued by the novelty of the plant's pleasantly relaxing effects, were able to figure out how to propagate the sterile offspring solely from stem cuttings. It is likely that

all kava plants today are kin stemming from this one original parental plant.

The origins of kava remain enigmatic, but ethnobotanists point to New Guinea and Vanuatu as sites where kava's spread throughout the Pacific Islands relied on human travel and subsequent cultivation. Rooted in volcanic soils, kava survives via cultivation in the humid and shaded understory of the tropical forest on islands including Melanesia, Micronesia, and Polynesia.

An evergreen shrub, kava bears heart-shaped leaves that gleam dark green and shiny on the surface, matte and pale underneath. Prominent curved veins radiate from the base of each luscious leaf. The thick stems appear multijointed, with swollen nodes marking intervals along the stalk where new shoots branch out.

THERAPEUTIC USES

For centuries, a nonalcoholic beverage made from the rhizome of kava has been exalted as a traditional ceremonial and healing drink in its homeland. The powerful lore of kava root has gone beyond, infusing the imagination of people around the world. Today, the cultivated root is in high demand on the global market, not only for medicinal but also for recreational purposes.

At its core, kava has a grounding and cooling energetic power, respected for soothing social and performance

anxiety without impacting cognitive clarity. A dropperful of tincture or a capsule of kava might be an ally before giving a public speech or entering a high-stress environment. Herbalists often recommend kava when someone is overstimulated or experiencing nervous tension under intense pressure.

Researchers have isolated a group of compounds identified as kavalactones in their quest to understand the herb’s calming effects on the central nervous system. Practitioners often recommend the encapsulated supplement, standardized to specific milligrams of kavalactone compounds, for people who struggle with clinical anxiety. Kava has been associated with hepatotoxicity for those with liver concerns, and anyone with a compromised liver should consult a medical professional before use.

The anesthetic sensation of kava generates a numbness upon the tongue, which radiates down the throat. It can be added to remedies for painful gums, toothaches, and sore throats to tone down discomfort and relax coughing spasms. It is especially helpful to de-escalate heat and irritation of the urinary tract in cases of cystitis or urethritis. Traditional folk herbalists of the islands commonly applied kava root poultices to areas of heat and tension like headaches and toothaches.

Traditional preparation of kava, represented in an 1893 painting by American artist John La Farge, who traveled extensively in the Pacific Islands

Gather Around the Kava Bowl

At first, a sip of kava beverage may not exert its strong allure upon its imbiber. It is muddy in appearance, earthy in flavor, slightly creamy in texture, and a touch sour and bitter in taste. But a few moments of pause bring about a slow, diffusive numbness to the tongue. A drink or two later, muscular stress melts away and social wariness dissipates, establishing an atmosphere of peaceful and carefree, yet cognitively capable, dialogue. It is no wonder the drink is considered such a profound vessel of prayer and communion with gods and a tool of peace and fellowship among people.

{ Lavender }

Genus and Species: Lavandula angustifolia
Family: Lamiaceae

A calming classic to soothe home, mind, and body

The ethereal enchantment of a lavender field strikes the soul of any herbalist, settling the mind and pacifying lingering worries. A classic silhouette of silvery green foliage and clouds of pink-to-purple flowers accentuate this romantic herb. Long appreciated for its clean and crisp fragrance, *Lavandula* comes from the Latin word *lavare,* "to wash," a reference to the plant's purity. So entranced are we with the beauty of the herb that today the word "lavender" has become an everyday word for the flower's unique shade of purple.

Lavender is a perennial shrub of the mint family. In its youth, as with other species in that family, each stalk has a square stem, but it eventually matures into aged woodiness. The aromatic and sticky leaves are short, pointy, narrow, and similar to those of its cousin rosemary. Terminal spikes

of two-lipped tubular flowers showcase lavender’s peak summer accomplishment. A true ornamental ally for any gardener, lavender flowers are tremendously alluring to bees and butterflies. Beloved in herbal gardens and along landscape edges for its wispy floral wands, lavender’s roots originate in the dry Mediterranean region, where it thrives on the rocky and sandy soils of misty seaside mountains.

THERAPEUTIC USES

There’s more to washing with lavender than the fresh light scent it leaves behind. Lavender possesses antiseptic properties and has been used to infuse bathwater, soaps, shampoos, household cleaning liquids, and linen washes

since antiquity. Another common practice through the ages is burning lavender as a fumigant to ward off disease in hospitals and homes during plagues. The contemporary home, too, benefits from a natural spritzer of lavender when there is a sick family member. The refreshing mist has the added aromatherapeutic effect of calming an emotional and stressful ambience. A few drops of lavender oil on a pillow or a lavender sachet beneath pave the way for deep, restorative sleep. The emotionally grounding scent is also helpful to ease nausea or clear the air after a bout of vomiting.

Lavender is an aromatic nervine with an uplifting air. Herbalists use this herb internally in formulas to calm the nervous system and center oneself in the face of disruption and anxiety. Like most aromatics, lavender ingested via tea or tincture is a wonderful carminative to help dispel gas and bloating after a heavy meal or when digestion is impacted by nervous “butterflies” in the belly.

Despite its somewhat soapy floral flavor, lavender aerial parts, including stem, leaves, buds, and flowers, are edible and make a delightful garnish or delicious lavender lemonade. Kitchen herbalists concoct syrups, honeys, vinegars, glycerites, tea blends, and tinctures from both the fresh and dry herb. The leggy stalks and elegant flowers add a magical touch to cakes and cookies and a distinct flavor when infused into savory sauces and marinades.

The practice of adding lavender to infused oils and salves lends the finished products an assortment of synergistic activities. Antiseptic lavender not only lengthens the shelf life of an item but can also expedite skin healing. Its freshness provides cooling and anti-inflammatory relief to heat and irritation from sunburn, rash, boils, pimples, and fungal flares. A lavender bath in tepid water soothes the mind and eases maladies of the skin and nervous system.

Fragrant bundles of lavender in flower

Community of Care With Lavender

The naturally calming scent of lavender has long been considered by herbalists to be effective in the immediate de-escalation of acute stress and panic. Herbal first responders in crisis situations commonly carry lavender essential oil in a first aid kit to allay stress and ease shock in those affected by traumatic events. For someone recovering from an anxious or intense situation, the lavender scent can be introduced through a nasal inhaler, aromatherapy diffuser, via inhaled steam, or simply by whiffing a few drops of essential oil. Lavender and other peaceful nervines are in high demand by mutual aid networks around the world for tending to those affected by calamity, upheaval, and distress.

{ Motherwort }

Genus and Species: Leonurus cardiaca
Family: Lamiaceae

A maternal herb to fiercely protect and soothe

If the lion sits on the throne of the mammal hierarchy, then royal motherwort wears the crown of the plant kingdom. As testament to this regal reputation, look no further than the origin of this plant's scientific name: *Leonurus cardiaca,* or lion heart. Nomadic like a lone lioness, motherwort roams territories all over the world. Native to Europe and parts of Asia, it is a commonly cultivated garden plant on other continents as well, revered on homesteads for its medicinal usefulness.

The perennial herbaceous motherwort emerges with the characteristic square stems of the mint family, typically growing two to four feet (0.6 to 1.2 m) before roaring into bloom via a small tubular inflorescence with two purple-and-white lips. In many areas, including parts of North America, motherwort does not thrive when caged up in gardens and has escaped cultivation to range on roadsides and fields, where it is often considered invasive. This vigorous expansiveness is typical of members of the mint family, which tend to spread easily by stretching roots underground

in a tight clumping fashion, often setting new seed and sending it on the wind into uncharted territory.

THERAPEUTIC USES

The profoundly bitter bite of motherwort is both cooling and grounding. Much like the mother lion, motherwort is considered a protector and guard of the heart. This herb is one of the most traditional remedies for irregular heartbeat and palpitations, especially when these symptoms are associated with acute anxiety and onset of panic attacks. A reliable ally, motherwort offers a quick downshift of the nervous system to cool off a flared temperament. One of its alkaloids, leonurine, has been studied for its anti-inflammatory qualities and calming effects on hypertension.

Herbalists worldwide find motherwort to be particularly useful in de-escalating hot and overreactive conditions, as in shingles, herpes, and nervous exhaustion. Bubbling rage and irritation are soothed by a dose. Motherwort's earthy comfort makes it a go-to for mood changes and temper flashes associated with PMS and menopause. Its tonifying effect on the uterus may alleviate cramps and encourage movement during sluggish menstruation. Such a fierce herb is not used during pregnancy, but ancient physicians commonly employed its medicine during childbirth to invigorate the uterus while easing the mother's anxiety.

For those with a fiery constitution that is easily triggered, motherwort is a tonic aid. Due to its potent bitterness, it should be taken with meals, when it will encourage healthy digestion while simultaneously inspiring a cool and clear head. Often the savvy herbalist opts for the quick and fast-acting approach: a dropperful of motherwort tincture. An intensely sharp infusion of motherwort does not make a tantalizing cup of tea, as it lacks the pleasant aromatic notes of many of its mint family members. But it can be

incorporated into a blend with peppermint or lemon balm or other more palatable herbs for a subtle cup of tea. Kitchen herbalists also experiment with chocolaty motherwort glycerites and syrups, which calm frenzied children. In Japan, a motherwort wine is enjoyed for longevity.

A close-up of motherwort in bloom

Motherwort for Melancholy

Nicholas Culpeper, a 17th-century English doctor with diverse interests in botany, herbal medicine, and astrology, used many botanicals in his daily practice. He claimed there was no better herb to beat the blues than motherwort. In his patients, he witnessed motherwort replacing sadness and sorrow with joy and merriment. Culpeper believed that each herb was ruled by different planets and constellations, and he saw uplifting motherwort under the dominion of Leo, the lion, and owned by the planet Venus, associated with a spirit of love and nurturing.

{ Mugwort }

Genus and Species: Artemisia vulgaris
Family: Asteraceae

A cherished, mineral-rich herb of the moon

The silver sway of feathery mugwort can be seen along river edges, disturbed lots, and roadsides. Zoom in, and it's easy to see the grooves along the purple-tinged stems. Mugwort plants can grow to over three feet (0.9 m) in height by the time the flowers appear in late summer. The inconspicuous yellow-to-red blossoms clump densely atop the stalks. The daisy-like flowers are primarily wind pollinated, and one stem can set thousands of seeds.

Native to Europe, Africa, and parts of Asia, perennial mugwort has also established itself well in the Americas, popping up as an invasive weed in many areas. *Artemisia vulgaris* is one of several species of the *Artemisia* genus, a few of which bear the common name of mugwort—a nickname pointing back to their long-ago use in flavoring

ale. To avoid harvesting potentially toxic botanicals, it is essential to have a positive identification for plants with deeply divided leaves, a characteristic mugwort shares with many, including poison hemlock. If there is any doubt, seek the advice of a local herb expert or botanist.

THERAPEUTIC USES

Mugwort has long been associated with all things lunar, and herbalists note that its medicinal strengths wax and wane along with the phases of the moon, depending on when it is harvested. Working with mugwort therapeutically at any time can provoke a dreamy experience. Even its ethereal aroma is known for evoking in the mind a mystical sense of heightened awareness and clarity. With its strong

associations with moon cycles and ceremonies, mugwort calls those who revere earth-based traditions to harvest it in moonlight.

The lunar lore of mugwort relays many magical uses. Dreamworkers revere mugwort, known to enhance creative centers of the brain, for its ability to bring visions and impart vividness to dreams. The dried herb is added to dream pillows and hung on bedposts to elicit these effects. Mugwort is also a common ingredient in herb-infused oils for ritual purposes. Its dried stalks and leaves are burned like incense to cleanse sacred spaces and move energy.

Beyond its magical appeal, mugwort has many practical applications. A sachet made by filling a sock or small muslin bag with dried mugwort leaves can be tucked into clothing drawers to keep moths away. As an aromatic bitter, mugwort can ease a full stomach and encourage digestion. Its bitter quality gently encourages activity in the sluggish liver and assists motility in the bowels, while its aromatic warmth relaxes the digestive organs and relieves gassiness. Mugwort leaf tincture is often used in antiparasitic formulas.

Mugwort’s connection to the lunar calendar is both metaphysically and physically tied to the menstrual cycle. Herbalists know the leaf tea or tincture to be effective for pelvic congestion and use it for cramps, bloating, and uterine heaviness around menstruation. Its stimulating quality can help bring on delayed or stagnant menses, and it is to be avoided during pregnancy. The dried leaves are added to herbal smoking blends to alleviate menstrual cramps and instill calm. Acupuncturists use mugwort to make moxa, dried bundles of the herb which are held over the body to stimulate the flow of qi in Traditional Chinese Medicine.

Young mugwort shoots less than four inches (10 cm) in length can be added to soup pots or salad bowls. More mature mugwort plants become tough and fibrous but are

used in infused vinegars for their nourishing mineral content.

Mugwort leaves, ready for processing

Fragrant Herb Bundles

Indigenous traditions worldwide call for burning herb bundles for their fragrant smoke, thought to be beneficial for the ritual preparation of sacred space and cleansing of illness in the air. Resinous and aromatic herbs such as pine, lavender, juniper, and mugwort are among the many botanicals that may be used to make these revered wraps. Paramount when working with dried herb bundles is sourcing herbs that are cultivated with integrity or abundant in the region. If the bundles are to be used ceremonially, praying or meditating over them adds intention to the experience. Adding an herb bundle to your own mantel, seasonal display, altar, or other designated spot carries this ancient tradition forward into the present day.

{ Passionflower }

Genus and Species: Passiflora incarnata
Family: Passifloraceae

A floral vine to impassion restorative sleep

The unmistakable passionflower is breathtaking in its complexity of blooms, tendrils, and exotic beauty. During the hot summer months, passionflower grows assertively, reaching up to 20 feet (6 m) in length, its vines trailing along fences and walls and its green coils sprawling across open fields. Passionflower is a wildflower native to the southern United States, stretching west to Texas and Oklahoma and north to Illinois and Pennsylvania. Populations of its various species have now naturalized in regions from Europe to Africa. The dark green passion vines are lush and large, with three-lobed leaves. The explosive summer blossom, about four inches (10 cm) in diameter, is composed of five whitish petals arranged among sepals of a similar shape so that the overall illusion is a showy 10-petaled flower.

Visually stunning, this tropical treasure suggests a whimsically floral ballerina. Just above the petals in radial symmetry appears a spectacular fringed crown of filaments, burgundy to white to purple in color. At the bloom’s center, three prominent styles and a stigma attach to the swelling ovary, which sits above five pollen-bearing anthers. Spanish missionaries associated the shape with the story of Christ’s Passion, the otherworldly tendrils of the passion vine connecting heaven and earth. Once pollinated, this ovary swells into the sweet fruit also called a maypop, a lemon-shaped greenish-to-orange edible delicacy that is very popular with wildlife. All passionflower’s aerial parts, including stems, leaves, flowers, and fruits, are used by the herbalist. The leaves contain higher amounts of medicinal

qualities and are best harvested just before or as the plant goes into flower. The juice of passion fruit, called *pulpa de maracuya* in Spanish, is made from the species *Passiflora edulis,* native to the American tropics. The fruits of *Passiflora incarnata* offer a hint of the sweet succulence of their tropical relatives. There are many species of *Passiflora,* and many varieties sold for ornamental purposes are not medicinal and may even be toxic.

THERAPEUTIC USES

Passionflower is most often used by the herbalist as a nervine, revered for its ability to pacify anxiety, ease pain, and calm affliction by soothing and nourishing the nervous system, which relaxes body and mind. The herb is a gentle aid for those suffering from sleeplessness, tension, or epilepsy. Passionflower is often used to allay both physical and emotional discomfort and quiet a panic response or intrusive thought patterns. Those experiencing cardiac palpitations may find passionflower tea or tincture brings on a calming effect. The tea is pleasant medicine for those who feel like they have too much on their mind.

Passionflower can soothe irritability or overstimulation and comes in handy as a calming tea for bellyaches associated with nervousness. As a gentle and reliable sedative, it is very popular in bedtime teas and herbal sleep blends, often helping children as well as adults.

Passionflower’s mechanism of action is thought to be its ability to induce GABA, a neurotransmitter in the brain that leads to quieting relaxation. Science gives credence to the use of passionflower as an antispasmodic to quell tremors, cramping, and convulsions. Some smokers enjoy adding dried passionflower leaves to their smoke blends to ease nerves and encourage relaxation. The smoked herb has a

pleasant delicate flavor, and its soothing effect aids those withdrawing from nicotine.

The intricacy of a passionflower: Green-tipped stamens and yellow-edged pistils are the male and female flower parts, respectively.

Passionflower Household Tisane

Passionflower tisane promotes peace in a stressful household, making a refreshing and calming alternative to caffeinated iced tea. Technically, the word “tisane” distinguishes herbal tea from that which is made from the tea plant, *Camellia sinensis*. As a rule of thumb, tisanes made of passionflower leaves and blooms may be infused for around 20 minutes. A tisane made from passionflower alone, or any one herb, is considered a “simple.” A blend might combine passionflower with other calming herbs such as chamomile or lemon balm. After preparation, tisanes should be strained and sipped while warm or stored in the refrigerator for up to three days. The tisane is a balm—in beverage form—for stress and sleeplessness.

{ Rue }

Genus and Species: Ruta graveolens
Family: Rutaceae

Sacred blue rue restores clarity of vision

The rue plant symbolizes vision and healing protection in cultures around the world. Its uniquely blue-green feathery leaves hold a sharply distinctive fragrance of dry acrid citrus, repelling to some and inviting to others. Hardy in a wide range of climates and in North America's growing zones four through nine, rue establishes itself as a shrub, growing two to three feet (0.6 to 0.9 m) tall under favorable conditions.

Rue is native to southern Europe and cherished in Latin America, where it is known as *ruda* and thrives as an evergreen. In cooler environments, it dies back in the winter and raises its full foliage when the warm days reappear in late spring. Adaptable rue is capable of thriving in the full sun of summer and in partial shade, where its leaves show up darker and bluer.

Rue is easy to grow in a container on the porch. As many attest to its protective energy, it is very common to see a pot of rue guarding the entrance to a home. At summer's peak, this handsome herb bursts into charismatic bright yellow blossoms. The central bloom of each cluster opens first to present five radiant yellow petals beneath 10 radial antennae-like stamens. A central green disk dotted with a tiny style wand is textured like the surface of a miniature lime, a clue to rue's place in the citrus family. While it produces small seedy fruits, these capsules are nothing like common household oranges and lemons. Uniquely, the other flowers that surround this pioneer blossom bear four petals and eight stamens.

Rue deserves great respect. Some people find that when handling the plant, especially on a hot sunny day, they experience a burning sensation or skin irritation known as phytodermatitis.

THERAPEUTIC USES

Rue's reputation as a visionary herb is both symbolic and literal. Some consider the flower's countenance to be a gazing eyeball with a pupil-like center. Perhaps its network of densely packed fibrous roots references the vast network of capillaries in the eyes, thus strengthening the herb's association with vision.

Famous painters were said to consume a small fragment of leaf to improve their powers of visualization as they created their masterpieces. Marksmen were keen to rub a little juice of rue onto their flints for improved aim. Fortune tellers enhance the spiritual gift of sight by burning rue candles. Many cultures believe that a sprig of rue wards off the evil eye and keeps watch over the home.

Contemporary herbalists consider rue to be an effective eyewash for eyestrain and irritations. A warm infusion of the leaves is applied to the eyes with a cotton ball, or a couple drops of rue tincture is added to warm water in an eyecup. In the mid-1800s, a flavonoid called rutin was discovered within rue. Rutin was first used in treatments designed to strengthen capillary fragility. Today, rutin, mostly sourced from buckwheat, is well known as an antioxidant supplement intended to fortify capillaries throughout the cardiovascular system and specifically to promote healthy blood flow to the eyes.

Women gather rue to weave into a crown, as depicted in the medieval Tacuinum Sanitatis.

Rue Rites of Passage

Perhaps no people are as taken with enigmatic rue as the Lithuanians, who honor it as their national flower. Introduced to Lithuania by Catholic missionaries, rue exhibits a hardy resilience through the harsh winters of the Baltic nation, a characteristic that strikes a chord in that stoic culture. There, the flowers represent purity and are employed as adornments during religious ceremonies from birth to passing. Rue is commonly referenced in folk songs throughout the countryside in poetic tribute to young courtship and bridal grace. At weddings, rue is woven into bridal crowns and bouquets as a symbol of innocence and beauty.

{ Tea }

Genus and Species: Camellia sinensis
Family: Theaceae

A power plant with many colors, tastes, and medicines

Second only to water, tea is the world's most popular beverage. The *Camellia sinensis* plant is the original source of its many iterations. While classic black tea is produced from leaves that have undergone a process of withering and fermentation, imparting a bold dark color, green tea comes from the unfermented leaves of the same plant and maintains a deep verdant shade. Another popular tea variety, oolong, is also derived from the same plant but is lightly fermented, giving it a bronze appearance.

The tea plant has been cultivated for thousands of years in Southeast Asia and especially in China. Bred and selected for generations, variations of tea cultivars are as endless as varieties of wine grapes. The growing region, climate, elevation, harvest method, and drying process all impact the nuances of each finished flavor quality of tea. *Camellia*

sinensis, left to its own devices, grows into a woody shrub or bowl-shaped tree with a stocky rough-barked trunk. When cultivated, it is pruned and kept as a low bush, making it easy to handpick the leaves and young buds.

The evergreen produces glossy and leathery elliptical leaves with fuzzy undersides. Its attractive and fragrant flowers are composed of creamy white petals arranged in a cup shape surrounding a center of bright yellow stamens. In some cases, three-lobed green fruits are allowed to ripen, their seeds pressed into a nourishing oil.

THERAPEUTIC USES

Green tea possesses a light and vegetal flavor, slightly toasted and delicately astringent. Due to its minimal processing, green tea is said to contain a greater spectrum of the herb's antioxidant polyphenols and flavonoids than the bolder and sharper black tea. An antioxidant compound in green tea called epigallocatechin gallate (EGCG) has been studied extensively for its anticancer and anti-inflammatory properties. Drinking green tea regularly has been associated with cancer prevention and improved cardiovascular health.

While both green and black tea contain caffeine, green tea exhibits effects on the metabolism that go beyond the mere presence of caffeine. Those with diabetes, obesity, hypertension, and high cholesterol may especially benefit from regular tea consumption. Daily green tea is thought to increase satiety and support those on a quest for healthy weight. In addition to catechins, phytochemicals booming with beneficial antioxidant activity, tea contains a plethora of medicinal compounds such as theobromine, theophylline, and theanine, known to relax smooth muscle, improve healthy blood flow, and improve attention span, respectively. Green tea is generally considered safe to consume daily, with the caveat that green tea extracts may elevate liver enzymes, even in healthy subjects.

Green tea can also be used topically as a cooling anti-inflammatory and antioxidant, aiding preventive wellness. A daily oral rinse of tea can help alleviate gum pain and inflammation, and a cool bath made from green tea soothes and prevents damage associated with a bad sunburn. As an astringent herb, a wet black tea bag comes in handy for convenient first aid to soothe a cold sore, weepy rash, or blister. A pitcher of tea added to a sitz bath is a pleasant way to tighten skin and ease irritations in sensitive places.

A 19th-century copy of an earlier Japanese painting shows traditional matcha green tea preparation.

Matcha: The Way of Tea

For centuries, Buddhist monks have refined the rituals of the “way of tea,” incorporating philosophies of harmony, Zen, and meditation to inspire mental well-being and spiritual clarity. Ceremonial-grade matcha dates back to the 12th century and refers to a special green tea product made by stone-grinding the young tea buds and leaves into a brilliant green powder. During the matcha ceremony, the powder is whisked (rather than steeped) into a bowl of steamy water, using a special bamboo tool. Special tea plants are grown to supply matcha. Shading these plants prior to harvest cultivates a deeper vibrancy of color in the leaves by stimulating the production of chlorophyll and enhancing the caffeine, antioxidants, and theanine present.

HERBAL HERITAGE

The Gullah Geechee Tradition

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Among the wide streets and Spanish moss–laden charm of southern cities, the bustle of touristy beach towns, and the daily routine of quaint fishing villages along the Atlantic coastline dwells a living web of medicine. Gullah Geechee place-based healing practices are rooted in African ancestry and embodied today in pockets of the southeastern United States. Gullah Geechee herbalists represent ancestral traditions in the cultural corridor ranging from Jacksonville, North Carolina, to Jacksonville, Florida, and 100 miles (160 km) inland, including the Outer Banks and the Sea Islands of the Atlantic coast.

The abundant beauty of this region manifests in swaths of saw palmetto and long horizons underlined by oyster beds mingled with brilliant sunsets and warm coastal breezes. The idyllic imagery provides a contrasting backdrop to an area otherwise defined by impenetrable humidity, the persevering saltiness of the tidal marshes, and the ubiquitous threats of mosquitoes, alligators, and snakes. Still, the human spirit of endurance in this challenging landscape is evident. After the intensity of the summer heat, mild winters give way to tropical springs that foster a rich diversity of plant life.

Medicinal use of this dense botanical repertoire is intimately entwined within the culture of Black and Indigenous herbalists of the lower Atlantic states. Gullah Geechee herbal traditions are infused with the vibrancy of

West and West Central African culture. Prayer and song while gathering wild herbs, drumming and incantation during the setting of healing intentions, and community medicine-making rituals are common practices.

The traditions of Gullah Geechee herbalists are also laced with the fortitude of their enslaved ancestors who—seasoned by ingenuity, survival, and self-reliance—had no choice but to rely on nature and the spirit world for tending their everyday maladies, reproductive cycles, and trauma care. Often prohibited by authorities from reading, writing, or administering care, secretive and hidden healers in this lineage found subtle ways to tend to their own, passing along herbal wisdom through the generations via storytelling, song and dance, and the creative arts. A pervasive mistrust of conventional medical services, along with remote isolation and rural lack of access to health care, shaped a culture of autonomy and community care that lingers among the Gullah Geechee diaspora, still passed down through the generations.

In South Carolina, a Gullah girl of the 1930s or 1940s weaves a basket of sweetgrass.

HEALING WATERS

Healers of this region worked with their hands in inland fields. Immersed in the elements, they became experts in the medicinal plants particular to this place. Garnering intimate details of their green surroundings and establishing a deep well of acuity around local plant identification plus harvesting and processing know-how, these medicine people became steeped in knowledge based on experience with topical poultices on wounds, bug and snake bites, and rashes—a wealth of practical guidance for Gullah Geechee herbalists today.

With both sacred and practical connections to water as a source of healing, herbalists of this lineage favor decoctions. Herbal tisanes might be brewed from wild plants like elderberries, passionflower, and boneset. Many common uses of these preparations inform the materia medica of American herbalism today, though the Gullah Geechee receive little credit for them. Black southern herbalists have routinely endured erasure of their contributions in historical accounts of medicine and botany.

Today, the vibrant herbal traditions of the Gullah Geechee persevere even as they face challenges. Losing access to foraging land disempowers herbalists whose families have relied on those resources for generations. Commercial development and gentrification of neighborhood communities displace those of this lineage from their traditional homelands. Coastal environmental concerns impact living traditions of the region. The passing of elder healers who take their stories and remedies with them threatens to snuff out traditional wisdom.

A stand of carnivorous yellow pitcher plants in South Carolina's Francis Marion National Forest

FOND MEMORIES

Khetnu Nefer, one of many tenders of the community, offers hope that the Gullah Geechee tradition might be preserved. The founder of the Gullah Geechee Herbal Gathering, Nefer curates this event for Black and Indigenous folks to learn from each other. The gathering takes place on family-owned land. There, the focus is on the intergenerational exchange of skills, which spotlights Afrocentric health and wellness. "The Gullah Geechee Herbal Gathering is so much more than just a conference," she says. "It's an opportunity for Black and Indigenous herbalists, Gullah Geechee people, and the community to converge, share, connect, and preserve a rich herbal and cultural legacy." Nefer's insight reveals a common longing for reconnection, a gap that herbalism and medicine stories have long filled.

Nefer reminisces about the lusciousness of maypop (passionflower) fruits gathered in the late summer. She learned about herbs as a young girl by watching her grandmother use them. “There were things that my grandma showed me but I was too young to know why, simple things like when I helped her pick tomatoes and she would rub a raw bit of tomato pulp on my bug-bitten skin.”

Although Gullah Geechee traditions are representative of a specific region, their influence extends far beyond into the larger Americas, taking their place among the melting pot of North American culture as a whole. Much as the Black diaspora has an undeniable influence worldwide, the population dispersion of Gullah Geechee descendants represents a cultural influence that informs many of the herbal practices seen today in the Americas.

Governmental policymakers are just beginning to place value on the heritage of the region. With the establishment of a federal national heritage area—the Gullah Geechee Cultural Heritage Corridor—the stories of the Gullah Geechee people will be shared in an effort toward maintaining their cultural traditions. Popular herbal preparations informed by traditional Gullah Geechee use—like elderberry syrup—are another way this coastal heritage remains relevant to the herbalist of today.

From dried marigold flowers come next year's marigold seeds.

Herbs Valued in the
Gullah Geechee Tradition

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BONESET
Eupatorium perfoliatum

ELDER
Sambucus spp.

JOE PYE WEED
Eutrochium purpureum

PASSIONFLOWER
Passiflora incarnata

ROSELLE HIBISCUS
Hibiscus sabdariffa

. . . . . .

9. Global Herbalism

ASHWAGANDHA
ASTRAGALUS
ELEUTHERO
KELP
MACA
RHODIOLA
ROOIBOS
ROSELLE HIBISCUS
SCHISANDRA
SHATAVARI
TURMERIC

Spices displayed at a Moroccan market

Plants Around the Planet

From rooibos of the southern cape of Africa to rhodiola of the Arctic, from kelp in the depths of the Pacific Ocean to maca of South America's highest altitudes, the pageant of herbs that have found their way onto drugstore shelves tells a survival story of resilient coexistence with humanity. These medicines are not only

revered in their homelands; they are readily available in commerce, inviting conversations about appropriate uses and ecological sustainability.

The most universally lauded medicinal plants have a rightful place in the planetary lineup of restorative remedies. Plant medicines that function as vitality tonics, for example, have won collective esteem so broadly that several are called by nicknames evoking relationships with the gold standard of adaptogenic medicinals: ginseng *(Panax ginseng)*.

Authentic ginseng medicinals come only from plants in the *Panax* genus, but invigorating remedies around the world have been developed that mimic its potency. Nutritive, hormone-nourishing maca root is called “Peruvian ginseng”; the steadying roots of ashwagandha are called “Indian ginseng.” Hailing from high altitudes, sturdy rhodiola root is called the “ginseng of the North,” while stamina-boosting eleuthero was sold for many years under the moniker of “Siberian ginseng.” In Traditional Chinese Medicine, the immune-modulating roots of astragalus are referred to as “ginseng of the young.” This collection of ginseng poseurs represents a group of highly sought herbs that improve resilience when the body is under duress.

Depicted in a 16th-century Chinese herbal, a wise teacher sits amid students at work making herbal preparations of various kinds—washing, steaming, grinding, roasting, and chopping plants for medicine.

HERBAL ADAPTOGENS THE WORLD AROUND

Today’s herbalist is well versed in botanical remedies that bring about balance in the face of hardship. Physiological stress places the body in peril and can cause inflammation and chronic pain, affecting reproductive vigor, immunity, mental health, and general well-being. Many of the best-known medicinal herbs respond to this situation, functioning as slow and steady restoratives for a burdened nervous system. Today, these remedies are called “adaptogens.”

Adaptogens were first defined in the 1970s by Russian scientists investigating herbs thought to aid the body under stress. Of special interest were herbs that address wartime exhaustion by altering homeostasis, or the body’s state of equilibrium. Herbs such as schisandra berry, eleuthero, and rhodiola came to the forefront as researchers explored their capacity to improve endurance and attention span, reduce fatigue, and even aid a body confronting external distress.

An understanding of these adaptogenic herbs is found within ethnobotanical knowledge predating such research. In Ayurveda, the roster of “Rasayana” herbs includes the replenishing tonics ashwagandha and shatavari, which support longevity and rejuvenation. In Chinese tradition, the herbs schisandra and astragalus stand out among all the qi tonics known to summon vital energy. The ancient Inca turned to maca in the quest for stamina, while the Inuit of the Arctic honor rhodiola as a supportive ally of fortitude. Each culture has its own favorite adaptogenic tonic.

A page from an Islamic edition of the Materia Medica of Dioscorides, a first-century Greek considered the father of pharmacology

THE WISDOM OF TRADITION

While many these days reach for herbs encapsulated and packaged as supplements, the kitchen herbalist preparing their own remedies is inspired by generations of hands-on experience, curating the collective knowledge associated with ancestral herbal preparations. Peruvian maca, for example, is traditionally cooked prior to being eaten. Scientific data now reinforce this practice, having discovered through analysis that heat enhances the biologically active components of the root.

The West African and Afro-Caribbean kitchen revels in the vibrant refreshment ritual of the hibiscus beverage, while a teapot of rooibos has a secure place in South African daily household routines. Both are now staples in teahouses around the world because of their protective and health-

enhancing qualities—and again, science confirms these qualities by determining that water-based preparation heightens the plant's antioxidant polyphenols.

Legacy recipes in the Ayurvedic tradition call for combining turmeric with absorption-enhancing black pepper in a coconut curry, a stir-fry with a touch of ghee, or a creamy mug of warmed milk. Scientific analysis verifies these fat-inclusive preparations, which boost the bioavailability of curcumin, the golden anti-inflammatory constituent of turmeric.

In short, we are learning that traditional recipes often involve processes that make the herbal medicines in them more easily assimilated by the body.

SUSTAINABILITY IN GLOBAL COMMERCE

Having made their way onto the mainstream of the worldwide wellness aisle, all of the plants in this chapter have endured heavy demand in a global marketplace increasingly catering to a consumer base profoundly affected by stress. But the market is not sustainable if the demand places parallel stress on the plants it's sourcing. Herbalists are now called to care for the wild plant populations of the world. Vast efforts must go into education: raising consumer awareness, studying the effects of cultivation on both the environment and the plants themselves, and paying attention to quality control of the delicate supply chains of these medicinal plants.

Bioregional advocates must protect sensitive habitats in order to sustain future botanical availability. Local governments can enact environmental protection regulations while putting forth guidelines for ethical wild harvest. Whether this practice involves leaving eleuthero roots behind to regenerate future growth or plucking only from the lowest hanging schisandra vines to protect panda

and tiger territory, accountability demands thoughtful stewardship of the natural world and benefits a harmonious relationship between plants and people.

To ensure long-term supply of these beloved remedies while still empowering small-scale farmer co-ops, several measures can be enacted: preserving Indigenous wisdom, establishing standards of fair trade, and setting up profit-sharing programs in the spirit of conscious stewardship. Dialogue about healthy working conditions and fighting against exploitation of the environment are non-negotiable. Earth-conscious consumers should take these factors into account when purchasing any herbal products.

Dried hibiscus flowers

{ Ashwagandha }

Genus and Species: Withania somnifera
Family: Solanaceae

A stress-relieving tonic with fiery strength

The Sanskrit word *ashwagandha,* meaning “smells of a horse,” alludes to the notoriously musty aroma of this herb’s roots. It likely also implies that the stamina of a horse is imparted to those who consume ashwagandha. Originally found in India, the Middle East, and regions of Africa, ashwagandha—also known as winter cherry or Indian ginseng (though it has no botanical relation to ginseng)—is related to the tomatoes, chilis, and eggplants of the infamous nightshade family. The family resemblance is apparent, especially at fruiting time, when the papery lantern-like husks peel away to reveal bright red berries similar to cherry tomatoes. A vague aroma of tomato foliage, elliptical gray-green leaves, and characteristic five-petaled flowers all show a resemblance to its relatives.

Ashwagandha root is a staple of the world of herbal medicine. Its thick, fleshy, beige taproots are in great demand within the supplement industry globally. Because of its special appeal to the massively stressed-out casualties of Western culture, ashwagandha has found its way onto the shelves of common drugstores in neighborhoods around the world.

THERAPEUTIC USES

Ashwagandha root is one of the most trusted herbs in the Ayurvedic tradition of India, where this bitter, sweet, and pungent tonic is thought to balance the three doshas, or

constitutions, especially vata and kapha. It is considered a Rasayana, a panacea of sorts, capable of promoting optimal well-being and longevity. Western herbalists consider ashwagandha root to be an adaptogen that increases the body's resilience to stress, particularly for those feeling depleted and debilitated. The most convenient form of this herb in commerce is capsules, though these may be more difficult to digest than a traditional ghee infusion.

Long considered an herb of invigoration and building, ashwagandha root nonspecifically boosts multiple organ systems. From a young age, children identified with a failure to thrive are given ashwagandha root powder in warm milk to help encourage growth. Ashwagandha root is respected as a catalyst of focus and retriever of memory and is taken by adults to clear brain fog, by elders to boost cognitive health, and by children to improve attention span.

As an endocrine tonic, ashwagandha can promote thyroid and adrenal health. It is a restorative agent to the reproductive tract, where it traditionally acts as a wholesome aphrodisiac. Ashwagandha root supports bone marrow and the production of white blood cells, making it beneficial both as an adjunct cancer treatment and a strengthener for weakened immunity.

Ashwagandha has a special affinity for steadying the nervous system. The species' epithet, *somnifera,* references the herb's sedative properties. Taken daily, the tonic grounds frazzled nerves and restores health from nervous exhaustion. The nourishing root is a game-changing ally for people struggling with day-to-day anxiety, insomnia, pain, and inflammation.

But ashwagandha is not a cure-all for everyone. In some cases, it may aggravate the energy of a fiery pitta—the third Ayurvedic dosha—and consequently, some people might find it overheating. Those who are sensitive to nightshade foods of the Solanaceae family may want to avoid it. Fortunately, there are myriad adaptogens of different energetics, and a

well-trained herbalist is fluent in matching the properties of adaptogens with the constitutions of individuals.

Dried ashwagandha root

A Spoonful of Ghee Makes the Medicine Go Down

When choosing herbal protocols, herbalists find it useful to consider the traditional methods of preparing each herb. Thousands of years of practice inform these herbal recipes. Ghee—made from butter that has been slowly clarified to filter away toxins and milk solids—has long been considered one of the most nourishing vehicles for delivering medicines, providing the synergy of plant and animal products, optimizing the digestion of nutrients, delivering healthy lubrication internally and externally, and nourishing the brain and nervous system. In the Indian tradition, ghee is blended with finely powdered herbs and taken by the spoonful: an ideal way to reap the maximum healing benefits of many herbs, including ashwagandha.

{ Astragalus }

Genus and Species: Astragalus membranaceus
Family: Fabaceae

A honeyed root to support and nourish healthy immunity

Astragalus, also called *huang qi,* has been one of the most important medicinal plants of Traditional Chinese Medicine for millennia and is now in popular use around the world. Native to China, Mongolia, and Korea, astragalus is a member of the Fabaceae, or legume, family. One of the world's largest plant families, Fabaceae is host to several other medicinal plants, including red clover and licorice, as well as many of the most important plant-based protein food sources, including peas, beans, peanuts, and soybeans. Fabaceae plants are ecologically important, because they fix nitrogen, drawing this gas out of the air and processing it via bacteria in their roots into a usable form for plants.

Astragalus is a sprawling herbaceous perennial that grows up to two feet (0.6 m) tall. Its laterally arching, fernlike leaves are composed of a series of paired oval leaflets. The dainty flares of whitish-yellow tubular flowers dangle in a row along the stem, resembling miniature dangling butterflies. Later, they form pods containing lentil-like seeds.

The great market demand for this herb has placed wild populations of astragalus at risk of overexploitation. As a result, vast efforts have gone into the study of astragalus cultivation and attention to quality control in supply chains. The majority of astragalus root on the market today originates from cultivated sources.

THERAPEUTIC USES

In honor of its invigorating qualities of promoting endurance and boosting qi, or life force, astragalus is often referred to as the “ginseng of the young.” The sweet, nourishing, and grounding root has a warming energetic with a profound affinity for the immune system. Specific for maladies of the lungs, it is believed to generate warmth and blood flow to the bronchial region while increasing resistance against respiratory infections. This makes it an ideal tonic for those with chronic asthma, bronchitis, and frequent colds.

Astragalus is commonly taken as a preventive during seasons when the immune system is under siege. Traditional Chinese herbalists, however, caution against using astragalus for flu, as it is not appropriate to stimulate the body's immunity when one is already sick. Instead, astragalus should be used prophylactically to strengthen the immune system's ability to respond to virus incursions.

While there is no shortage of encapsulated astragalus supplements on the market, this herb is also sold in dried, sliced roots known as astragalus sticks, which look somewhat like tongue depressors. Rich in polysaccharides, these sticks are called for in several traditional recipes. They may be boiled in a decoction or simmered in soups and rice pots, where the mild flavor of astragalus does not interfere with the dish.

Astragalus can feed the immune system over time. It is regarded as a restorative tonic for immune organs such as the spleen and the thymus and is used to bring balance to T-cells and antibodies for patients with compromised immunity, cancer, HIV, and autoimmune conditions. Considered an adaptogen for general well-being, astragalus is also stabilizing for those who struggle with seasonal allergies, type 2 diabetes, kidney inflammation, heart disease, and hepatitis.

色黄，为补药之长，故名。
甘肃东南部），洮阳（今甘肃临
（今甘肃岷县之南）者，色白肌
者，色理胜蜀中者而冷补。”而苏
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亦佳。”由此可知，我国古代黄芪正
综合有关黄芪的产地和形态的考证，
认为古代正品黄芪是以膜荚黄芪及蒙
【原植物】
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Astragalus
ngholicus Bge.)——豆科 Legu
多年生草本。
小叶12～18对；小叶片小，
端近圆形，上面无毛，下面
20余朵；花萼钟状，密被短柔毛
长圆状倒卵形，翼瓣及龙骨瓣均
膜质，膨胀，半卵圆形，直径11～
期6～7月，果期7～9月。（彩图7
生于向阳草地及山坡。野生或栽
分布于黑龙江、吉林、河北、山西
2. 膜荚黄芪 别名：山爆仗(山东)
Astragalus membranaceus (Fisch.)
Leguminosae
多年生草本，高50～80cm。主根
小叶6～13对，小叶片椭圆形至长圆

写为“芪”。陶弘景说：“第一出陇西（今
今亦难得，次用黑水（今四川黑水）宕昌
而温补。又有蚕陵白水（均今四川北部）
州（今宁夏固原）及华原（今陕西耀县）者
附近）宁州（甘肃、陕西的东西边界）者
从甘肃、四川向宁夏、陕西过渡的情况。
正类本草》中“宪州黄芪”的附图，可以
注。
日（蒙药音译）。
mongholicus (Bge.) Hsiao (*A. mo-*
立，高40～80cm。奇数羽状复叶，
圆形，长5～10mm，宽3～5mm，两
状花序腋生，常比叶长，具花5～
至淡黄色，长18～20mm，旗瓣
9+1)；子房光滑无毛。荚果
部有长子房柄，均无毛。花
省区。
B. Sch. Bip.)——豆科
分枝。奇数
mm，宽

Astragalus root, and a Chinese description of it

Chinese *Paozhi*

Generations of hands-on experience have curated knowledge of herbal preparations in Chinese medicine. *Paozhi* refers to the ancient Chinese technique of processing herbs differently for various therapeutic effects. Paozhi involves a wide range of practices, including roasting, crushing, burning, stewing, or soaking in wine or honey. The results become herbal products ready to dispense for decoction. One typical method for preparing astragalus is roasting the root in honey. Honeyed astragalus, called *zhi huang qi,* is thought to tonify the body by supporting the internal organs, thereby lifting the qi due to the sweet and nourishing qualities of honey. Raw astragalus is reserved for defending the body from more outward conditions of the skin and lungs that are associated with immune deficiency, such as eczema and asthma.

{ Eleuthero }

Genus and Species: Eleutherococcus senticosus
Family: Araliaceae

A tonic adaptogen for sustained energy and endurance

Eleuthero thrives in its preferred habitat: the cold coniferous mountain forests of Russia, northern China, Korea, and Japan. Often referred to as Siberian ginseng, eleuthero is not to be confused with true ginseng. While they are both in the Araliaceae family, eleuthero is not a member of the *Panax* genus, which designates genuine ginseng.

Eleuthero is a deciduous spiny shrub found among the woodland undergrowth and along field edges, where it colonizes and forms thickets. Its younger stems are covered in bristles. It grows slowly, typically peaking at around six feet (1.8 m) tall but able to climb up to 15 feet (4.6 m). The bright emerald leaves are long and palmate, usually made

up of three to five elliptical leaflets with serrate margins and often growing on bristly reddish stalks.

Depending on the climate of its region, eleuthero enters its flowering phase between July and October. Multiple globes, each composed of dozens of white-to-mauve flowers, decorate the shrub at its floral climax. The spheres later appear weighed down as they burst into clusters of small, dark blue fruits. Far below, eleuthero rhizomes lie shallow in the ground, anchored by long, woody, and pliable roots that form massive webs.

THERAPEUTIC USES

Eleuthero is traditionally enjoyed as a building tonic, used to treat fatigue, stress, and lowered immunity, particularly among the elderly. This herbal catch-all is especially supportive as a preventive during cold and flu season and as an herbal ally during stressful transitions of many kinds. Eleuthero is considered a potent adaptogenic herb with an affinity for adrenal and immune health, as it can promote resilience in these organ systems. It is suitable as a long-term restorative aid for those feeling run down and frazzled.

The root, commonly prepared as a decoction, is used to improve mental and physical performance and manage the body's reaction to stress, especially among the chronically ill or those exposed to environmental or physical stress. Athletes are especially fond of eleuthero's support sustaining sprints, endurance, and training recovery. Eleuthero's herbal actions may seem paradoxical in the way that it upholds energy in those who have those energetic reserves yet can also promote restful sleep for those who are depleted. It affects individuals differently, according to their needs, making it a true adaptogen.

Eleuthero has been thoroughly studied, especially in its Asian homelands, and its benefits are thoroughly documented in scientific literature, which advises practitioners against using the remedy during an acute phase of infection. The root lowers blood sugar and is often used in formulas to exert this support on those with type 2 diabetes. Studies also point to the herb's anticarcinogenic properties and report improvements of lipid panels in those using it therapeutically. Eleuthero is rich in bioactive medicinal constituents, including eleutherosides, which have been the central focus of medical research into this herb's effectiveness.

In recent years, heavy demand for this powerful medicinal has reached global levels, raising concerns over the sustainability of the wild-harvested roots. Farm-raised

eleuthero is increasingly available to meet commercial demand.

Dried eleuthero root alongside eleuthero tincture

What's on a Label?

The United States Farm Security and Rural Investment Act of 2002 included a provision banning the use of the term "Siberian ginseng" in the marketing, sale, and trade of *Eleutherococcus senticosus*. The provision indicated that labels referring to the dietary supplement using the word "ginseng" are considered to be mislabeled unless they are referencing members of the *Panax* genus. To keep track of the ever changing accepted common names of herbs in the marketplace, consult the American Herbal Products Association's Herbs of Commerce guide, which is updated periodically.

{ Kelp }

Genus and Species: Macrocystis pyrifera
Family: Laminariaceae

This fast-growing underwater alga is an ecological and nutritional powerhouse

Deep beneath the ocean's surface, a busy underwater jungle of thick, eel-like kelp fronds swells and surges their deep-green-to-brown flags to and fro with the rhythm of the waves. Thriving kelp forests take up abundant sea bottom real estate from the Asian Pacific coastline to the western coast of North America, making up an incredibly biodiverse habitat that supports myriad plant and animal species within its slick tendrils.

Spanning lengths of up to 165 feet (50 m) from sandy bottom holdfasts, or root systems, to the crest of waves above, kelp blades are visually impressive. Their long, leafy fronds are densely textured in a ruffled pattern resembling

the folds of a human brain. Many other ocean life-forms depend on kelp’s flexible, vital infrastructure.

Kelp is considered to be a type of brown algae. Seaweeds are categorized botanically according to their pigments: brown, red, and green. There are many different types of kelp; some are known by common names such as oarweed or kombu.

The ecological balance within the various moving parts of a kelp forest is delicate. Despite the crucial role that kelp plays in the oceanic ecosystem—providing safe harbor and nutrition for many species and offering coastlines protection from erosion by lessening the power of destructive waves—the once abundant fields of kelp have begun to thin and disappear. Sustainability-conscious consumers will pay attention to the possibilities of kelp farming and aquaculture as they evolve.

THERAPEUTIC USES

This dark leafy green of the sea is deeply nutritive, antioxidant rich, protective of the immune and cardiovascular systems, antiviral, and antitumor. The mineral-heavy qualities of kelp make it a favored ingredient in tooth care, as it is thought to remineralize, benefit the enamel, and fend off plaque. The algin in kelp is also believed to chelate heavy metals and eliminate them from the body.

As a salty ocean product, kelp may be best known for being a rich source of natural iodine. Iodine is an essential mineral, especially important for thyroid and endocrine function. Often taken in capsule form, kelp and other seaweeds such as bladder wrack may be used by herbalists for improving the vitality of a sluggish thyroid. Those who are hyperthyroid, however, may want to avoid consuming large quantities of seaweed.

This sea staple is an increasingly frequent ingredient in luxury skin care products due to its intense hydrating characteristics. Slippery and slimy kelp makes an excellent mucilaginous healing agent for a variety of dry, painful, or red skin ailments, including burns, irritations, rashes, chafing, blistering, and more.

A nutritionally dense food and medicine of coastal communities for centuries, kelp is also a digestion-aiding prebiotic. Kitchen herbalists often swear by cooking with kelp as a way of increasing the digestibility of legumes. Tossing in a couple of kombu strips with kidney bean chili, for example, is a common method thought to reduce gas or indigestion.

Crunchy dark green strips of dried kelp—naturally savory and salty with a strong hint of that craveable umami taste sought by chefs worldwide—make a top-notch convenience food. Delicious powdered or flaked and sprinkled on popcorn, in a finishing salt, with a rice dish, or on its own,

kelp adds zest without being overpowering or fishy, making it an excellent culinary finish as well as a potent medicinal herb.

Giant kelp in the Pacific Ocean, near San Diego, California

Kelp! Is It Safe?

Tragically, many pockets of our global waters have become major repositories of toxic waste, heavy metal contamination, and radiation, hence careful sourcing of ocean products is of the utmost importance. The chilly, pristine waters of North America's Pacific Northwest, Hawaii, and Iceland are the best source locations for high-quality kelp. Giant kelp—a bioremediation agent—is capable of concentrating any radioactive iodine it encounters, but it also quickly clears this away, registering no traces of radioactivity a mere month after testing positive. Kelp has vast potential as a recycler of human waste products. While a variety of kelp worldwide are edible, caution should be exercised with certain species of kelp such as *Laminaria* spp. and *Hijiki fusiforme,* which seem to uptake toxins like arsenic more than others.

{ Maca }

Genus and Species: Lepidium meyenii
Family: Brassicaceae

A high-elevation herb to nourish the body through all life stages

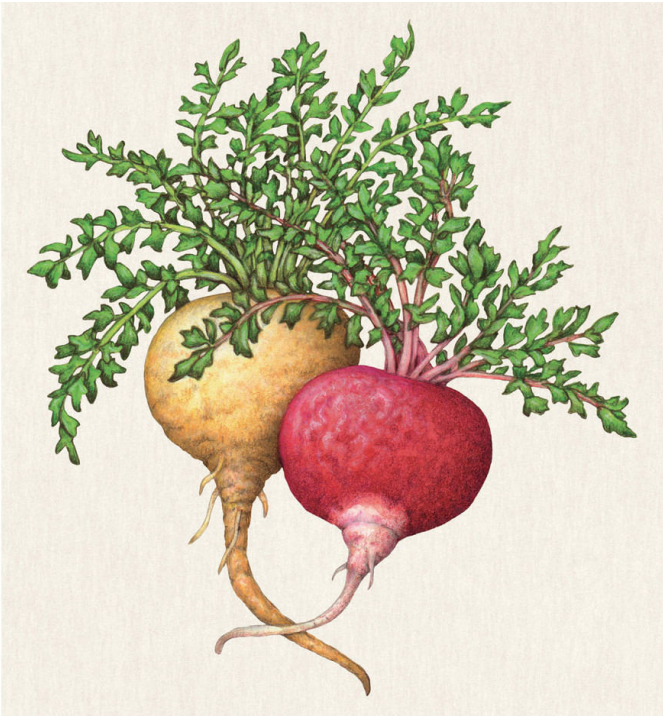
Hailing from the high altitudes of the Peruvian Andes, maca root has risen to worldwide recognition as a promoter of vitality and stamina. Enthusiasts have nicknamed it the “Peruvian ginseng” in yet another tribute to the highly esteemed energizing root.

A member of the Brassicaceae family, maca root closely resembles its botanical relatives with its turnip-shaped roots and lacy mustard-like leaves. A relative newcomer to the global adaptogen market, the maca plant itself seems to have adapted well to the chilling frost, intense sunlight, and harsh wind of its home mountains. Its short, stout greenery appears to be a survival trait to avoid wind blasts.

Maca’s home altitude of choice is no low-level thing. The natural habitat of this root ranges to elevations approaching 16,000 feet (5,000 m) above sea level. Where few other

plants thrive, maca has been a staple of Inca cultivation for thousands of years—a root so revered that it was used as a form of currency in trade. Today, the farming tradition continues for Peruvian homesteaders who rely on medicinal maca for income.

This herb is a great source of pride and economic hope for the Peruvian nation, which has placed protections on the exportation of whole tubers. While maca is typically traded as a creamy yellow powder, in its homeland a wide variety of maca roots are grown, yielding an array of shades of green, red, purple, and even black. Allegations of international biopiracy of roots for the purpose of unsanctioned cultivation have been a concern. Conscious consumers are aware of the importance of supporting the South American farmers who bring generations of traditional ecological knowledge into the growing and processing of the roots.



THERAPEUTIC USES

Maca skyrocketed to global herbal fame as a promoter of sexual and reproductive health in the late 1990s, when the herb hit the supplement market under the banner of treating impotence. While this campaign generated interest, it reduced and simplified the herbal effectiveness of maca rather than examining its overall benefits.

In the eyes of Peruvian folk healers, maca's starchy roots are a modest staple food eaten for basic sustenance, a general health tonic to encourage vitality, energize libido, enhance fertility, and support menopause. Traditionally, maca roots are often ground and prepared as a porridge in a dish called *mazamorra de maca*. The roots are also boiled into a beverage with tropical fruits and sweetened to make a punch, *ponche de maca*. For a probiotic twist, maca is simmered with purple corn and strained to produce a brilliant cranberry-colored drink that is then fermented to make *chicha de maca*.

Maca has a multifaceted effect on the whole neuroendocrine system and the hypothalamus-pituitary-adrenal axis, which gives it its reputation as a feel-good modulator of neurotransmitters. Researchers focus on maca's various components, including heat-activated macamides, which have been associated with optimizing the endocannabinoid and adrenal systems, therefore offering hormonal balance and mood support. The choosy consumer will note that many practitioners prefer maca products that are gelatinized (heat-steamed, not treated with gelatin) over raw maca.

Dried roots of Peruvian maca

Some Like It Cooked

Traditional food preparation methods benefit from centuries of accumulated knowledge. In Peru, maca roots are always cooked prior to eating. Science adds another layer to this custom, finding that heat enhances the biological effects of the root. Boiling removes glucosinolates that may be goitrogenic, affecting the thyroid, while enhancing the presence of compounds like macamides for optimal medicinal benefit. The traditional preparation for *mazamorra de maca* boils the maca roots or powder with Indigenous foods such as quinoa to make a nourishing breakfast suited to those in convalescence or in need of stamina. As a bonus, cooked maca is sweeter and easier to digest.

{ Rhodiola }

Genus and Species: Rhodiola rosea
Family: Crassulaceae

A succulent for sustained stamina

A member of the stonecrop family, rhodiola resides naturally in high altitudes among the frosty habitats and rocky mountainous soils of northern latitudes. Its circumpolar home range is widespread throughout the Arctic regions and high peaks of the world, including the northern parts of Asia, North America, and Europe.

This aromatic floral root is a sacred herb of Tibet and an important survival medicine within Viking and Inuit culture. It is celebrated as a tonic in Chinese, Russian, Mongolian, and Scandinavian cultures. As interest in the “ginseng of the north” spread worldwide, concerns grew about the availability of wild rhodiola in its native habitats. Fortunately, it is possible to grow *Rhodiola rosea* in nearly any cool climate, provided the seeds are cold-stratified—that is, given a long freeze before germination.

Once established, the slow-growing plant does well in a rocky garden spot, where it adorns crevices with its sedum-

like succulent blue leaves. Plants grown in stressful conditions upregulate the production of secondary metabolites that are often considered medicinal. This is likely true for rhodiola, a plant that endures and thrives in extreme conditions yet still manages to send up a sunny floral tuft and a rose-scented root, providing a remedy for folks enduring extreme conditions of their own.

THERAPEUTIC USES

The most sought-after part of the rhodiola plant is its thick, fragrant, and astringent root. Traditionally, rhodiola root medicine is taken to improve physiological function in high

altitudes like those in which it grows. Its adaptogenic properties also make it useful in support of general physical and mental well-being during times of stress. It’s a stamina tonic for periods of fatigue, especially when focus and productivity are desired. Athletes, for example, may benefit from the tonic during the recovery phase of an exercise protocol.

Rhodiola can especially support the nervous system and is often recommended to restore nerve integrity. Some find this herb’s energetic property to be awakening and invigorating. It may be taken in the morning to increase attention, work productivity, or concentration on one’s studies in preparation for a demanding day.

Rhodiola exerts a protective effect on the brain and so is promoted for relieving headaches, lifting depression, balancing mood, and supporting cognition. Its guarding energy extends to the heart and endocrine organs, especially when an individual is facing a period of duress. It can be helpful in promoting thyroid and adrenal well-being and is often recommended for the fatigue and foggy-headedness that may accompany menstruation or menopause.

The wonderful thing about adaptogens is that each one has a unique set of characteristics, and the informed herbalist is adept at matching the right plant to the right person’s constitution and condition. Like any herb, rhodiola is not for everyone. Many find the tea to be overly astringent, and herbalists tend to avoid rhodiola as a long-term tonic for those who are easily overstimulated or have dry constitutions. Rhodiola supplements in capsules are often standardized in a lab so that measurable amounts of compounds called rosavin and salidroside are present. These markers are regulated for the herb’s integrity, consistency, and identity.

Rhodiola’s succulent leaves and flowers

Alaska-Grown Rhodiola

Given the increased demand for high-quality rhodiola in the United States, Alaska farmers are trying their hand at the frost-hardy crop. Long summer days and frozen winters give Alaska a head start in the effort of cultivating rhodiola. As a bonus, the moose don’t nibble on it. But there are challenges. For these enterprising farmers, growing this herbal crop is a long-term investment of time and patience. It takes several years for the roots to reach medicinal levels of compounds and become mature enough for harvest, and rhodiola plants in Alaska are exposed to weeds and pests they normally would not encounter at higher altitudes. Hopefully, though, these efforts will help take pressure off the market for rhodiola in the wild.

{ Rooibos }

Genus and Species: Aspalathus linearis
Family: Fabaceae

A mild red “tea” abundant in antioxidants

The distinctive red rooibos, originating exclusively from the cape of South Africa, is becoming a familiar sight in teapots around the world. A novel but increasingly common feature in eclectic international herbal blends, the needlelike leaves of the broomy rooibos shrub impart an earthy depth and bronze hue to a teabag infusion. Rooibos is not technically “tea,” as that moniker is reserved for the leaves of the *Camellia sinensis* plant. Yet in many rural South African households there is always a pot of rooibos tea on the stove. And for many newer rooibos aficionados, the brew has risen to the status of a staple, taking the place of black and green teas as an everyday ritual beverage.

Like the black tea made from *Camellia sinensis,* most rooibos found in the tea shop has been fermented, thus

imparting a rich amber color and deep flavor. Unfermented green rooibos, similar to green tea, is a lesser-known option that is lighter and milder in flavor. Drying the herb right after harvest preserves its green color and yields an infusion of a light peachy hue. In contrast to traditional tea—and perhaps one reason why rooibos has risen in popularity—rooibos offers a satisfying flavor but lacks caffeine and tannins, hence providing a smoother, more palatable, and more grounding tea-drinking experience for sensitive sippers.

As demand expands for rooibos, communities must negotiate to protect the interests of traditional lands in the face of large-scale commercial exploitation. Farming co-ops have gathered to empower small-scale farmers in the production of this unique herb. Earth-conscious consumers will take this into account and select ethically sourced rooibos.

THERAPEUTIC USES

Whether taken with milk and honey, one lump of sugar or two, and served steaming or over ice, rooibos is a versatile drink for all to enjoy. As a household remedy, it is given to colicky babies and fussy children. It’s enjoyed by mothers during nursing to support lactation, and then becomes a friend to toddlers during weaning. It’s a gentle remedy for children with diarrhea and elders with an achy stomach. It is also used topically as a poultice for rashes.

The primary health benefits of rooibos are attributed to its extraordinary supply of protective polyphenols, which generally guard the body from illness. When drinking rooibos for health and well-being, it makes sense to reach for the unfermented green version, which, like green tea, contains far more antioxidant polyphenols than the fermented version.

The antioxidant boost associated with rooibos can benefit cardiovascular health. There is also some evidence that the decoction has significantly more of these powerful compounds than the mere infusion, and so ideally the herb should be steeped or gently simmered for at least a full 10 minutes for optimal extraction of beneficial antioxidants.

Science is just starting to uncover the ability of rooibos’s restorative compounds to support people with atherosclerosis, hypertension, and cholesterol concerns. Like green tea, rooibos can be an ally for weight management, and it also holds promise in the prevention of type 2 diabetes.

Delicious rooibos easily integrates into a healthy diet and lifestyle regimen. It takes its place among the abundant cornucopia of global foods and herbs packed with health-supporting antioxidants, such as blueberries, cacao, green tea, and fresh aromatic herbs and spices.

Fresh rooibos tea, rich in antioxidants

Fair Trade Herbs

The global concept of fair and equitable exchange in the herbal industry involves many issues: sustainability and ethics in international trade, healthy working conditions, and protections against the harmful exploitation of the environment. Ethical trade principles advocate for economic empowerment among local communities and value small scale-growers and harvesters, especially in marginalized areas with a history of violence, poverty, and loss of Indigenous lands. Ethical sourcing also considers the intellectual rights of Indigenous communities. Efforts in South Africa to develop a profit-sharing program to benefit local growers of rooibos—an herb fast gaining international popularity—represent the sort of advances alive within the conscientious herbal community.

{ Roselle Hibiscus }

Genus and Species: Hibiscus sabdariffa
Family: Malvaceae

A sweet-and-sour floral sheath to support the blood

Roselle hibiscus adds zing and sour flavor to many bright-red tea blends prized in households around the world. Origins of the famous hibiscus point to an epicenter in West Africa, although its range expands east toward India and Saudi Arabia.

This ornamental and medicinal herb has a wide geographical distribution today, attributed to the incredible impact on the world's herbal culture of the African diaspora. Evidence points to thousands of years of roselle cultivation in western Africa, and farming collectives today promise economic empowerment to local communities.

Today, roselle is naturalized and cultivated widely in all parts of the tropical world. Known as sorrel in the Caribbean and *flor de Jamaica* in Latin America, roselle hibiscus adorns cottage gardens with its delicate silky blooms and brilliant

scarlet calyxes. During a hot, humid summer, the shrub rises up to eight feet (2.4 m) tall, its burgundy stems leafing out in deep greenery. The leaves range from simple arrowhead to multiple-lobed maple leaf patterns, each adorned with red veins.

Flowers emerge from leathery red buds on short stalks. As days shorten and the summer heat fades, the bright red fleshy buds give rise to unfurling blossoms. Creamy in color, their petals radiate from a crimson center and soften to a warm shade of peach as they wither and fall. In a matter of days, the starburst calyx cups swell to contain acorn-shaped fruits. The mature seedpods resemble slimy okra, a botanical relative in the Malvaceae family.

THERAPEUTIC USES

Hibiscus flower tea is actually made from the rubbery floral sheath known as the calyx. At harvest time, herbalists peel these star-shaped vessels away from the seedpods they encircle and use them fresh or dry. The roselle calyx elicits a mouthwatering experience with its tart cranberry flavor. High in pectin, fresh calyxes are joyfully used by kitchen herbalists to make pies, jams, jellies, syrups, and a wide array of pucker-worthy sweets.

In traditional West African cuisine, the young leaves of hibiscus are used as well, tossed in salads and added to curries. In Sudan, the seeds are sprouted and fermented as a high-protein food called *furundu,* similar to miso. A powder of the calyx is often blended with spices to add flavor to sauces.

Afro-Caribbean folk herbalists draw on their ancestry by using uplifting remedies of roselle for fevers, sore throats, allergies, and colds. Loaded with immune-supportive antioxidants, vitamin C, and quercetin, a bioflavonoid which supports mucus membrane health, roselle is an ally in the protection of collagen and promotion of glowing skin. It is also a rich source of age-defying anthocyanins, which support healthy blood vessels and enhance heart and brain health. Roselle has long been used to maintain healthy blood pressure in people with hypertension. And, as with blueberries and other foods high in anthocyanin pigments, roselle remedies help regulate blood sugar and lipid levels.

In Latin America, warm hibiscus tea is taken to nourish hormonal balance and remedy menstrual cramps. The infusion is a reliable and gentle diuretic, also especially suited for edema, swelling, or heat-driven issues of the urinary tract.

Roselle hibiscus buds on the verge of blooming

Hibiscus All Day

Whether it’s the *zobolo* of Ghana or the *zobo* of Nigeria, tangy red hibiscus beverages are a staple among many cultures of the tropical world. It takes only walking into any restaurant in Mexico to learn that *agua de Jamaica* is just as popular a drink there as sweet tea is in the American South. Caribbean and Latin American elders pass along spiced recipes to enhance the tart refreshment with accents of lemon verbena, citrus peel, and cinnamon. In Senegal, the vibrant drink *bissap* is made from roselle with varied touches of bay, ginger, or orange blossom. Roselle refreshment is woven into the daily routines of these cultures. Not only is it a delicious treat for all ages, but it is also restorative and cooling to the blood on a hot, humid day.

{ Schisandra }

Genus and Species: Schisandra chinensis
Family: Schisandraceae

Five flavors, one berry, and a thousand uses

At its fruiting peak, clusters of small juicy berries dangle from the bright leafy vines of schisandra. The brilliant ruby color of the berry thrills the eye as much as its juice electrifies the taste buds. The northern species of the berry goes by *wu wei zi* in Traditional Chinese Medicine, where it is used interchangeably with the southern species, *Schisandra sphenanthera*.

An ambitious climber, the Chinese magnolia vine, as schisandra is sometimes called, can reach upwards of 30 feet (9 m) in length. In nature, the cold-hardy vines grow wild in East Asia, eastern Russia, and Japan throughout the fields, along the sandy soils of stream banks, and in deciduous and coniferous forests. The daintily scented white flowers need a cold burst to set fruit. Harvesting takes place after the first frost of the year.

Some schisandra is still wild-harvested, but global demand requires a supplemental supply, now coming from wild-simulated farming and broad-scale cultivation projects. The concern over sustainability of wildcrafted schisandra berry has led to close examination of ethical practices and quality standards, especially when caring for its native region’s richly biodiverse forests, which include panda and tiger habitats.

THERAPEUTIC USES

For physical and mental reset, schisandra is the palate cleanser of choice. At first, its flavor may come as a shock. In Traditional Chinese Medicine, it’s called the five-flavored berry because it combines them all: sweet, salty, bitter, pungent, and sour. But individuals who benefit the most from it seem to adapt to the flavor and eventually even crave it over time. Tart, zingy, bitter, mouth- puckering, and revitalizing all at once, schisandra awakens the brain into clarity and focus.

Kitchen herbalists love to experiment with syrups, glycerites, honeys, and lemonade-like refreshments made from this one-of-a-kind berry. Clinical herbalists dispense it as a bold and quick-acting tincture or as a powder or dried berry for decoction.

Primarily an adaptogen, the five-flavored schisandra berry offers stability and stamina in times of stress. Like most adaptogens, the tonic exudes positive effects on multiple systems of the body. Traditional Chinese Medicine confers upon the five-flavored berry the rare status of tonifying all the organ systems at once.

A warm daily decoction reinforces the body’s resolve and adaptability during stressful transitions. When periods of cognitive intensity are around the corner, like final exams or demanding deadlines, schisandra helps people stay on track with sustained energy. A tincture of the herb is a good traveler’s companion, having been revered for long journeys, keeping balance amid a hectic itinerary and helping with jet lag and adjustments to various time zones.

Herbalists turn to schisandra for liver restoration in cases of hepatitis, cirrhosis, fatty liver, and toxicity. Not only does it exercise fierce hepatoprotective (liver-guarding) qualities, but it may also aid in hepatoregeneration.

An immune ally, especially when exhaustion puts the body at risk of illness, schisandra can become a preventive aid. On the other side of illness, it can reawaken the stagnant lymphatic system to clear debris and is a good

herbal option for a lingering late stage of the common cold or when bouncing back from a flu.

Dried schisandra berries

Panda-Friendly Schisandra

Conservation efforts around this slow-growing vine involve people, plants, and animals, interwoven as schisandra's larger ecosystem. Native to broad-leaf Chinese forests, it shares its habitat with giant pandas and Siberian tigers, both critically vulnerable species. Environmentally responsible wild-harvesters take special care not to pull down entire schisandra vines, preferring instead to snip the fruiting clusters from the lower parts of the plant. While most southern Chinese schisandra is still wildcrafted, efforts to grow wild-simulated schisandra are now in full force in northern China. Additional efforts are under way to incentivize conscientiously harvested products through a Tiger Friendly Certification. Orienting resilient rural economies to the importance of sustainably gathering schisandra helps preserve these communities and the endangered plants and animals.

{ Shatavari }

Genus and Species: Asparagus racemosus
Family: Asparagaceae

A bland and gentle root to restore and nurture

Shatavari is rooted deeply in the traditional medicine stories of the Ayurvedic tradition, yet its range spreads throughout Africa, Australia, Sri Lanka, and the Himalaya. Similar to the common kitchen asparagus *(Asparagus officinalis),* with which it shares its genus, shatavari beams with feathered foliage and a shrubby fern-like appearance dotted by dainty white flowers and bright red seedpods. While some do enjoy the tasty shoots of both plants, it is shatavari's root that holds important medicinal value.

Shatavari is called the herb of 100 roots. It is hard to believe that such an airy-looking plant arises from such a massive presence of succulent tuberous roots. Whereas wild culinary asparagus is foraged for its aboveground spears, its roots left to produce over many years, shatavari is foraged

by digging up the root, thus killing the plant. Like many other globally important medicinal plants, the conscientious cultivation of shatavari represents an important source of income for farmers, and consumers should purchase it from cultivated rather than wild-harvested sources.

THERAPEUTIC USES

The deep, nurturing quality of shatavari root treats conditions that stem from dryness and depletion, especially inflammation caused by internal heat. In Ayurvedic terminology, it cools a fiery pitta temperament and moistens

depleted vata tissues. Shatavari is respected among herbalists for its protective, strengthening impact upon the mucosal membranes and for its soft calming effect on a fragile nervous system.

Cleansing and grounding, shatavari is cooling to the liver, lending support for detoxification, and often recommended to assist in nutritive restoration. Shatavari soothes dry membranes of the digestive organs and is a healing aid for irritated ulcers. To an imbalanced endocrine system or tired adrenal glands, shatavari is a restorative adaptogen and can help reestablish menstrual and circadian—day and night—rhythms with long-term use. It is rich in the phytoestrogens and steroidal saponins that lay the groundwork for hormonal health.

Shatavari is the legendary herb of one hundred lovers. The lore of this herb inspires love, desire, and devotion in the juiciest of ways. While gently nourishing the reproductive tract, it sets the stage for libido, especially when dryness is a concern. As a tonic for the reproductive system, it is especially used as a nutritive ally to support fertility and healthy sperm and ova. Shatavari is a galactagogue, helping with milk production during the nursing years. A comforting tonic, it is taken internally to support healthy vaginal lubrication and reinstate menstrual balance. During menopause, shatavari is a cooling friend to smooth out sudden hot flashes while restoring depleted areas of the body.

In India, a medicated ghee for topical use is prepared with shatavari root to restore balance to delicate tissues. Another skin aid, used for moistening and hydrating, is made by infusing shatavari and ashwagandha in sesame oil.

Powdered shatavari root

Sowing Overnight Oats

Many Ayurvedic herbs, including shatavari, are commonly available as finely ground powders. Shatavari has a starchy sweetness that lends itself to blending into everyday recipes. One easy way to incorporate the bland powder into one’s diet is to add a teaspoonful to an overnight oats recipe. This breakfast can be made by soaking equal parts oats and milk (or milk substitute), plus the teaspoonful of shatavari powder, in a jar for at least two hours and preferably overnight, then adding desired toppings in the morning. No cooking necessary! Oats share a similar profile to shatavari in nourishing fragile nerves, building up after depletion, and tending to convalescence. Ghee and milk are also common Ayurvedic ingredients that synergize well with adaptogenic powders, and ashwagandha and rhodiola can also be stirred into overnight oats.

{ Turmeric }

Genus and Species: Curcuma longa
Family: Zingiberaceae

A lauded golden root to counter inflammation

Southeast Asia is the origin of this world-famous golden spice, with India at the center of its cultivation, usage, and export. Like the kava plant, turmeric is sterile and unable to reproduce from seed. Now nonexistent in the wild, *Curcuma longa* is thought to be a hybrid descended from a wild parent, its current population strictly under human cultivation via intentional propagation of its rhizome.

There is no shortage of reasons for humans to want to domesticate turmeric. From an aesthetic vantage, the exotic aromatic is gorgeous to behold, with breathtaking tropical white flower spikes and striated, sun-worshipping leaves. Its ginger-like root, when sliced open, is visually electrifying—a vibrant orange; when placed upon the tongue, it tantalizes the senses with a sweet peppery bite.

As a natural dye, turmeric root must have inspired the sunniest of fashionable silk and linen. Buddhist monks of ancient times used turmeric, among other plants, to dye their robes. Still economically important as a coloring agent in the food and textile industry, preparations of the contemporary root sit on store shelves around the globe today as a well-known curry spice and profoundly important health supplement.

Given the huge market demand, turmeric has rooted down in tropical farms all over the planet. With health-conscious trends fueling the American market, Hawaii is fast becoming a leading producer of organic turmeric.

THERAPEUTIC USES

Turmeric is deeply woven into the traditions of Asia, cited abundantly in the literature of Ayurvedic, Unani (Arabian or Islamic), and Chinese medicine systems. Many ancient folk uses persist to this day. For example, the juice or paste of turmeric has long been used topically to heal sore throats, wounds, shingles, chicken pox, cold sores, and burns. Today, turmeric is known as an effective antiviral, anti-inflammatory, and antioxidant, lending credence to various folk remedies and building on its reputation as a support to all systems of the body.

Turmeric is a tremendous ally to the liver, both protective and regenerative. It can enhance cardiovascular health by reducing inflammation of the blood vessels and supporting normal cholesterol levels. Turmeric is appropriate for systemic inflammation of all varieties and can be taken as a chronic tonic or an acute remedy for “flare care.”

Joint pain associated with acute injury or chronic arthritis tends to settle down when turmeric is put to the task. Herbalists recommend turmeric for long-term management of inflammatory skin conditions, including eczema. Taken preventively, it seems to minimize histaminic reactions associated with hay fever, allergies, and asthma. Turmeric is a bitter aromatic and digestive tonic and soothes irritations of the gut lining.

Compounds called curcuminoids give the root its brilliant color and provide medicinal benefits. These antioxidant compounds are being studied extensively now for their ability to treat ailments associated with inflammation, including cancer, heart disease, depression, and autoimmune conditions. Curcumin has been isolated and encapsulated as a supplement, widely available commercially. Modern research points to improved bioavailability of curcumin when taken with dietary fats and

when combined with an alkaloid called piperine, which is found in black pepper.

Turmeric roots, some cut to show their colorful interior, surround a bowl of powdered turmeric.

Better Together

Multiple generations of work with herbs inform the Ayurvedic tradition. Kitchen wisdom predates modern scientific insights and suggests synergistically inspired food combinations. Golden milk, for example, is a traditional Ayurvedic recipe made by softly simmering a generous dose of turmeric and a pinch of black pepper into milk, with a drizzle of ghee or sesame oil added just before drinking the warm, nourishing beverage. Tradition precedes science: We now know that both healthy fats and the compounds found in black pepper expedite the intake of curcumin across the intestinal lining. It is no coincidence that traditional curry dishes combine fats, black pepper, and turmeric.

EPILOGUE

Lovely red clover, so often overlooked, can enhance various herbal preparations with flavor, color, and medicinal properties.

Tending the Spirit

- - - - - - - - - - - - -

Our ancestors depended on plants for their everyday nutritional needs. For many Indigenous cultures, plants are not a commodity but a facet of the living earth—part of the collective, the larger family, and even the self. These people understand that it is impossible to separate one's own health from the well-being of the whole.

This concept transcends history and remains relevant even in today's modern world, where, according to the World Health Organization, an estimated 88 percent of all countries use traditional medicine. In countries where allopathic medicine predominates, the intersection of tradition and science remains essential, since more than 40 percent of pharmaceutical formulations are nature-based. Even in the most developed nations, marginalized communities experience health disparities, furthering their reliance on herbs and herbalists for community health.

Hands hold a woven bowl filled with red rooibos leaves for tea.

HOW WE TALK ABOUT PLANTS

The rhetoric of global herbalism requires close examination. Language choices can objectify herbal medicines, separating them from their physical environment and the bioregional heritage within which they grow. Colonizing and imperialistic narratives express “power over,” “control of,” or “ownership of” the land and its resources, whereas Indigenous discourse expresses harmony with the natural world and alliances with the plant kingdom.

Against a backdrop of the historical subjugation of Indigenous lands, the popularization of herbs native to these lands presents a dilemma. Careful language can uplift the

experience of Native peoples and amplify their voices. Without their foundational and dynamic contributions to herbal traditions, recipes, and uses, herbalism as we know it might not even exist. Western herbalists must recognize and acknowledge the profound contributions of Indigenous and Black communities to the field.

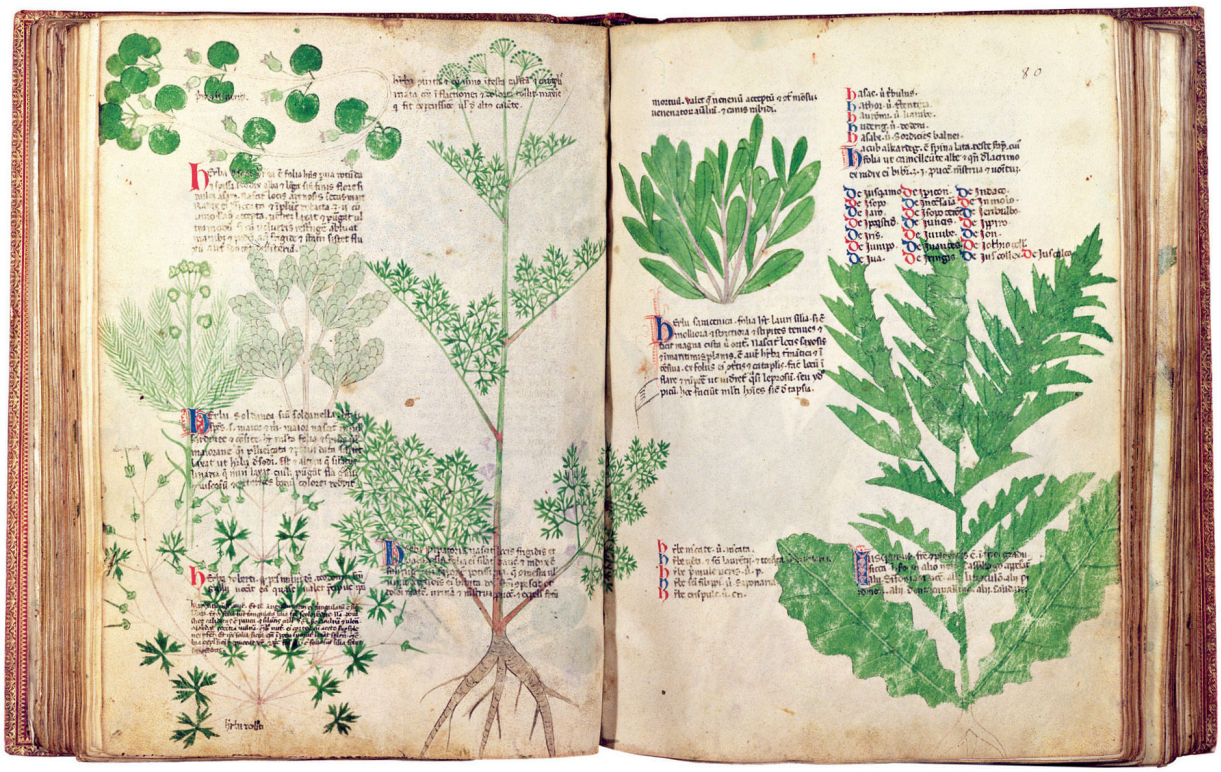
The informed herb user considers these aspects of social and environmental justice when sourcing any plant material, whether gathering a wild plant or purchasing an herbal product. When we wildcraft, we may be altering an ecosystem that serves as home to many nonhuman species. When we harvest and process an herb because of its historical or traditional uses, we might overlook its current importance to a culture that still relies on it.

Fireweed brilliantly paints the North American landscape.

SUSTAINABILITY IN THE SUPPLY CHAIN

Herbal remedies grow in popularity year after year. Market analysts estimate that consumers spend more than $150 billion a year on herbal medicine around the world. But this massive growth of global commerce threatens the sustainability of fragile herb populations. Local alternatives, often plentiful, are overlooked in favor of trending imported herbs. An ideal alternative is a bioregional approach, focusing on what is local, available, and in season, keeping the conservation of native plants in mind. Weedy and abundant plants—the dandelions and chickweeds of the world—grow so prolifically that herbalists can harvest these freely, with gratitude, almost anywhere on the planet.

Simulated wild cultivation of native plants can also offset commercial herbalism’s impact on the world’s habitats, as in the case of wild-simulated American ginseng in the forests of West Virginia. There, landowners are encouraged to scatter seeds and plant ginseng to replenish the forest floor with new patches of this valuable herb that will thrive independently in its native habitat. Small-scale cultivation by trusted plant stewards and Indigenous groups is another climate-friendly solution oriented toward justice for people, plants, and the planet.



Pages from a 14th-century Italian herbal

EMPOWERMENT OR EXPLOITATION

The global concept of fair and equitable exchange in the herbal industry builds on principles of sustainability and ethics in international trade. It requires consideration of healthy working conditions and potential exploitation of the environment. Ethical trade principles advocate for economic empowerment among local communities and place value on small-scale growers and harvesters, especially in marginalized areas tainted by a history of violence, poverty, and loss of Indigenous lands. Ethical sourcing also considers the intellectual rights of Indigenous communities. For every herb that makes it into the big leagues of herbal commerce, the conscious consumer must ask whether its harvest empowers or exploits its culture of origin.

In South Africa, impassioned ideas like these inspired a landmark profit-sharing program between the multimillion-

rand rooibos industry and Indigenous communities. This program pays homage and recompense to the Khoisan peoples, the original keepers of knowledge about this herb's medicinal and culinary uses. Rooibos is so revered in this culture that some nursing mothers consider its nourishing tea an acceptable substitute for breast milk. Indeed, the National Khoisan Council chairman, Cecil le Fleur, speculates that his people live in such a close relationship with this herb that it has become intertwined with their DNA. Now steps are under way to compensate these keepers of traditional wisdom, ensuring the sustainable production of rooibos for a world eager to consume it, while promising some measure of economic prosperity for its human stewards.

Precious roots of ginseng

IN CONSIDERATION OF THE ETHNOSPHERE

Ethnobotanist and National Geographic Explorer Wade Davis coined the word “ethnosphere” to describe, as he put it, the “intellectual, spiritual, and social web of life” of the world —“the sum total of all the thoughts, dreams, ideals, myths, intuitions, and inspirations brought into being by the imagination since the dawn of consciousness.”

This myriad of perspectives crafts a collective tapestry of humankind’s intellectual and spiritual awareness. Davis points to an alarming erosion of the ethnosphere on par with that of the biosphere, suggesting that the planet is suffering not only the loss of biodiversity but also the loss of diversity of language, stories, and cultures. As part of this erosion of the ethnosphere, the herbal traditions of many cultures are disappearing as we veer toward globalization, homogenization, and appropriation.

No matter what our cultural heritage, we all descend from a lineage of herbalists. But every herbal heritage weaves its own unique tapestry, and the world is a richer place with all of them intact and remembered. Lucretia VanDyke, author of *African American Herbalism,* urges folks to speak with their elders, to record their stories, to keep the tapestry from fraying. She encourages more people to be community culture keepers and storytellers. If we don’t tell our own stories of herbs and healing, they might disappear. Herbal storytelling—learning the plants, sensing their essence, finding ways to incorporate them into a healthy daily life—is essential, for the future foragers of dandelion and chickweed, and for the future of the ethnosphere.

Cocoa, warm and inviting, is enhanced by cardamom, cinnamon, and star anise.

AN INVITATION

As I consider the final words I would like to relay to the readers of *National Geographic Herbal,* one of my *tías,* a matriarch on the Mexican side of my family, reaches out to me. I had sent her the first paragraph of my preface to obtain the family's blessing as I shared the story of my *abuelita* in the opening of this book. I received not only her approval but, to my heart's delight, an invitation to come to Mexico and hear her stories and memories of my grandmother.

This invitation brings immeasurable joy to my heart. It is an opportunity to go beyond my own childhood memories and ask the questions I didn't know to ask then—the questions that mean so much to me now that I have become an herbalist.

I have sometimes asked myself whether it was me who picked the plant path or the plants that picked me. No matter where the pull originated, following that call has proved to be a deeply rewarding venture. I still stay open to hearing the voices not only of my teachers but also of the herbs themselves and the medicine they offer. It is my hope that this book brings those voices alive for you.

For the curious, open-hearted herbalist, an invitation from the plants always awaits.

Two tea leaves: the promise of new growth

GLOSSARY

. . . . . .

adaptogen | An herb that strengthens the body and immune system in the face of stress.

alkaloid | Any of numerous usually colorless, complex, and bitter organic bases (containing nitrogen and usually oxygen) that occur especially in seed plants. An alkaloid is a basic organic compound with alkaline properties that generally has a marked physiological effect on the nervous and circulatory systems. It can act as an analgesic, local anesthetic, tranquilizer, vasoconstrictor, antispasmodic, and hallucinatory agent.

amino acid | Any of a class of 20 molecules that are combined to form proteins in living organisms. The sequence of amino acids in a protein—and therefore protein function—is determined by the genetic code.

analgesic | A medication used to relieve pain.

anesthetic | A drug that causes anesthesia, or a reversible loss of sensation.

annual | A plant that grows for only one season, produces seeds, and then dies in the winter.

anthocyanin | Any of a group of red-violet plant pigments.

antifungal | An agent that is destructive to fungi, suppressing their reproduction or growth.

anti-inflammatory | An agent that reduces the heat, redness, and swelling of inflammation.

antimicrobial | An agent that kills microorganisms or inhibits their growth.

antioxidant | A chemical compound that protects against cell damage from oxygen free radicals, molecules that are major causes of disease and aging. Antioxidants are found in many foods, including fruits and vegetables.

antiparasitic | An agent that kills parasites or inhibits their growth.

antiseptic | A substance that discourages the growth of microorganisms.

Gray goldenrod

antispasmodic | A drug or substance that is used to relieve spasm of the involuntary muscles.

antiviral | A drug or treatment that is effective against viruses.

apothecary | A place where remedies are kept.

aromatic | A plant that emits volatile compounds associated with a scent.

astringent | An agent that causes contraction or shrinkage of tissues; it is used to decrease secretions or control bleeding.

Ayurvedic medicine | The ancient Indian system of sustaining health and fighting disease based on equilibrium with nature. Ayurvedic translates as “meaning of life.”

biennial | A plant whose life cycle extends over two growing seasons.

bile | A greenish-yellow fluid secretion from the liver stored in the gallbladder and associated with digestion of lipids.

bitter | A sharp pungent flavor that lands on dedicated receptors and triggers appetite and digestive processes.

carminative | An agent that relieves and removes gas from the digestive system.

cholagogue | A substance that stimulates gallbladder contraction to release bile flow into the duodenum.

choleretic | A substance that stimulates production of bile in the liver.

collagen | The main structural protein found in the skin and other connective tissues; an insoluble fibrous protein, it has both clinical and cosmetic uses.

decoction | A preparation made by simmering tough plant parts in water.

demulcent | A mucilaginous substance that leaves a cooling protective film over a mucus membrane.

Gentian

diaphoretic | A substance that induces perspiration.

diuretic | A substance that increases the flow of urine from the body.

doctrine of signatures | The theory that plants display physical characteristics that resemble the conditions, organs, or body parts that they are meant to benefit.

electuary | A powdered substance mixed with honey or syrup to form a paste.

emollient | A substance applied topically that soothes the skin.

enzyme | A protein that accelerates chemical reactions.

essential oil | A natural oil typically obtained from distillation and having the characteristic fragrance of the plant or other source from which it is extracted. Also known as volatile oil.

ethnobotanical | Having to do with plant knowledge derived from cultural or traditional usage.

expectorant | A substance that stimulates removal of mucus from the lungs.

extract | A concentrate of active constituents that is obtained from a plant using a solvent such as ethanol or water.

family | A level of classification in the plant kingdom above genus and species, with technical family names usually ending in the suffix “-aceae.”

fiber | A dietary material containing substances such as cellulose, lignan, and pectin, which are resistant to the action of digestive enzymes.

flavonoid | A group of chemical compounds occurring in all vascular plants. In the diet, flavonoids are found in many fruits, vegetables, teas, wines, nuts, seeds, and roots. Many of the medicinal actions of foods, juices, and herbs are directly related to their flavonoid content. Flavonoids exhibit antioxidant properties and other effects.

flower essence | An herbal preparation made from a flower whose healing vibration is thought to imprint in water.

free radical | A chemical that is highly reactive and can oxidize other molecules. When produced within cells, free

radicals can react with membranes and genetic material to damage or destroy cells and tissues.

galactagogue | A substance that increases milk supply.

Highbush blueberry

garble | A form of post-harvest processing that involves separating leaves from stems by hand.

genus | A level of classification in the plant kingdom below family; the first word of the two-word Latin binomial, which is always capitalized.

ghee | A clarified butter commonly used in Ayurvedic medicine and in Indian cooking.

glucosinolates | Sulfur-containing compounds commonly found in pungent cruciferous plants.

glycemic index | A value assigned to foods based on their impact on blood sugar.

glycoside | A product of secondary metabolism in plants. Glycosides break down into two parts—the glycone component, or sugar, and the nonsugar, or aglycone, component.

goitrogenic | A substance that may interfere with thyroid function.

hepatoprotective | A substance that prevents damage to the liver.

hepatotoxic | A substance that is damaging to liver cells.

herbaceous | A type of plant with little or no woody tissue, usually living a single season.

homeopathy | A form of alternative medicine that treats patients using preparations containing infinitesimal doses of a substance that, in normal doses, would produce symptoms of the disease it is intended to treat.

California poppy

Indigenous/indigenous | Native to a certain region.

inflammation | The immune system's response to tissue injury or harmful stimulation caused by physical or chemical substances. Release of inflammatory chemicals and increased blood flow to affected areas result in swelling, redness, and pain.

inflorescence | Group or cluster forming complete flowering head of a plant.

infused oil | The result of an herb or plant part being soaked or macerated in oil then strained.

infusion | Tea made by steeping an herb in hot water.

inulin | A complex sugar—a polysaccharide based on fructose—found in the roots of various plants; as a dietary fiber it can improve heart and gut health.

invasive | A non-native plant that spreads quickly and can disturb natural habitats.

isoflavone | A plant-based compound that mimics estrogen and is often found in legumes.

legume | Any member of the Fabaceae (or Leguminosae) family, all of which bear nodules on their roots that contain nitrogen-fixing bacteria. Includes peas, beans, and clovers.

liniment | A thin medicinal fluid rubbed on the skin to reduce pain.

materia medica | A body of collected knowledge about the therapeutic uses of plants.

mucilage | A gelatinous substance produced by some plants that is often used in herbal medicine as a soothing agent.

mucus membrane | A layer of cells that lines orifices and internal cavities of the body.

native | Indigenous to a region or habitat.

naturalized | In botany, any process when a non-native plant escapes into the wild and survives.

nervine | An herb that exerts a soothing influence upon the nervous system.

organoleptic | Pertaining to the use of the senses to ascertain information about a plant or substance.

palliative | Referring to support that eases symptoms and provides comfort.

panacea | A remedy for all ailments.

parasympathetic | A branch of the nervous system involved in restful processes.

pectin | A polysaccharide extracted from the cell walls of plants, used in making jellies and jams.

perennial | Any plant that has a life cycle of more than two years.

pharmacopoeia | A book containing an official list of medicinal drugs together with articles on their preparation, usually produced by legislative authority; or a stock or collection of medicinal drugs.

phytochemical | A chemical found naturally in plants that has metabolically active qualities.

Shining rose

phytoestrogen | An estrogen-like compound occurring naturally in legumes and other plants; it can both mimic the effects of estrogen or act as an estrogen antagonist.

polyphenols | A large group of chemicals derived from phenol (a benzene ring with one hydroxyl group attached) that contribute to the color, taste, flavor, and medicinal actions of many plants.

polysaccharides | Carbohydrates often in the form of starches or cellulose composed of long chains of sugar units bound together. In herbal medicine some polysaccharides are associated with immune support.

poultice | A preparation of fresh, moistened, or crushed dried herbs that is applied externally to treat ailments.

prebiotic | A food substance composed of indigestible fibers such as inulin that benefits healthy microorganisms in the body.

probiotics | Live microorganisms, often found in fermented foods and in nature, that inhabit the skin, digestive tract, and other parts of the body and play an important role in supporting digestion and immunity.

pungent | A sharp and penetrating flavor.

refrigerant | A substance that cools the body.

rhizome | A somewhat elongated, usually horizontal, subterranean plant stem, often thickened by deposits of reserve food material, that produces shoots above and roots below; distinguished from a true root in having buds, nodes, and usually scalelike leaves.

rubefacient | A substance that brings blood flow to the surface and causes redness.

salve | An ointment-like substance often infused with herbs and applied topically for healing purposes.

saponin | Any of several glycosides in plants that make a soapy lather when mixed with water.

Marshmallow

sitz bath | A warm shallow tub of water often infused with therapeutic herbs.

species | A level of classification in the plant kingdom below genus; second name in the Latin binomial, designating organisms in a genus.

stamen | The pollen-bearing organ of a plant, consisting of the filament and the anther.

stigma | The receptive tip of a carpel or several fused carpels in the female reproductive parts of a flower.

styptic | A substance used to stop bleeding.

succus | A freshly expressed juice of a plant taken for therapeutic purposes.

sympathetic | A branch of the nervous system involved in the stress response.

synergist | A substance that enhances the effectiveness of another.

tannins | A group of simple and complex phenol, polyphenol, and flavonoid compounds bound with starches. Aside from their astringent, mouth-puckering properties, these chemicals can help stanch bleeding from small wounds, slow uterine bleeding, reduce inflammation and swelling, dry out weepy mucous membranes, and relieve diarrhea.

tincture | A plant preparation made by soaking an herb in water and ethanol (never isopropyl alcohol) and straining it.

tisane | An herbal tea.

tonic | A substance that exerts a nourishing and strengthening effect.

tonify | To exert a nourishing and strengthening effect.

umbel | An inflorescence that consists of a number of short flower stalks, called pedicels, that spread from a common point; their appearance is similar to umbrella ribs.

vermifuge | A substance that expels or destroys parasitic worms and other parasites.

viscous | Thickness of consistency, used to describe a liquid.

volatile oil | *See* essential oil.

vulnerary | A substance used in the healing of wounds.

wildcraft | The act of gathering wild plants.

Multiflora rose

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Boldface indicates illustrations.

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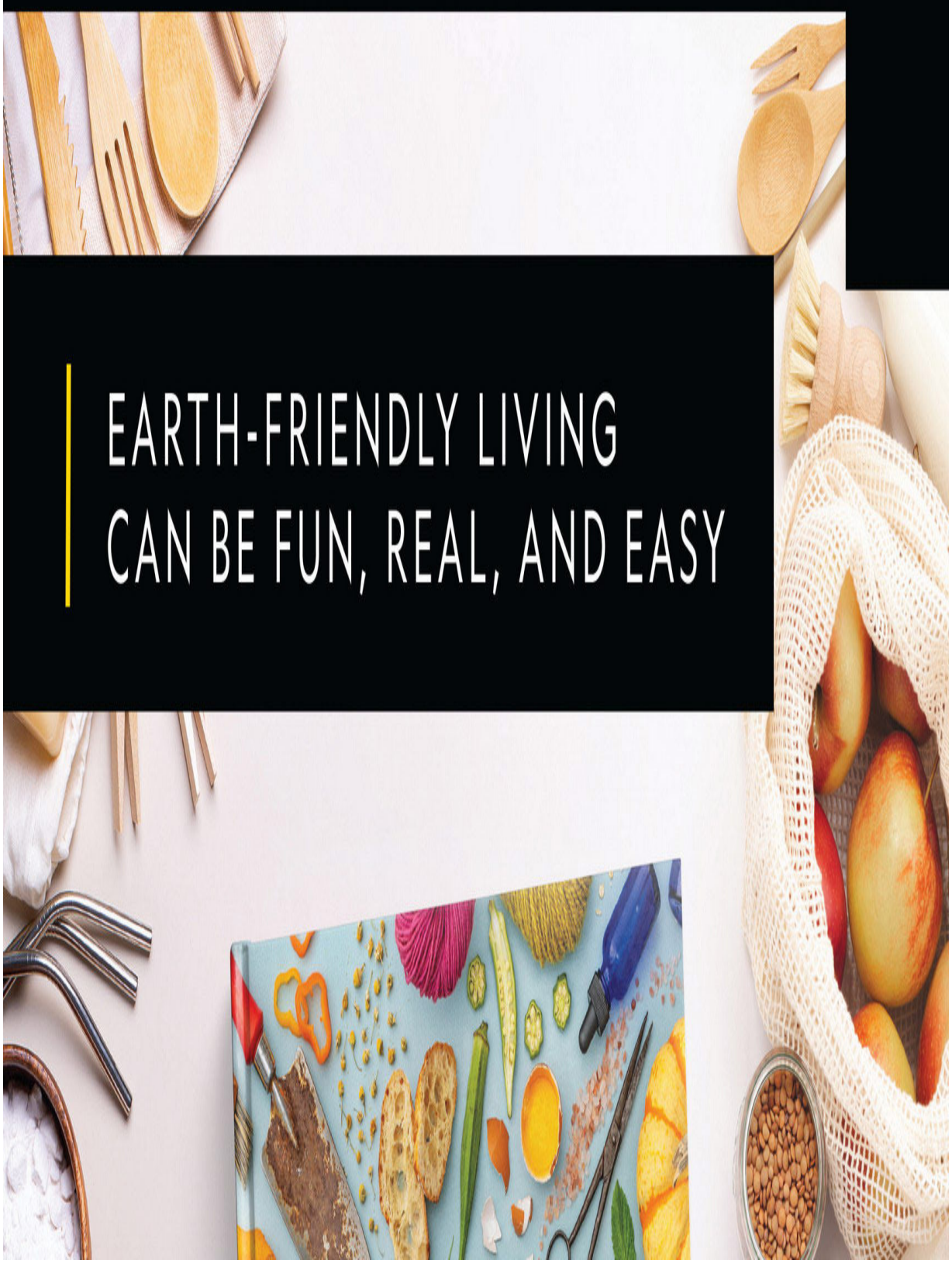

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